C.F. Combined Production and Resources Board

C. F.
Combined Production & Resources Board

August 19, 1942

My dear Mr. Nelson:

I read with the greatest interest the first report of the Combined Production and Resources Board which you sent me, another copy of which, I understand, is being sent to Mr. Churchill. I cannot lay too great stress on the importance, for the successful prosecution of the war, that I attach to the work now being carried out by the Combined Production and Resources Board. ×5007 ×48

In view of the short time during which the primary task of the Board is to be accomplished, I wish to receive from you progress reports at short intervals, and in any case by the middle of September, indicating to me how far progress has been made in the accomplishment of its objective.

I appreciate that in the last analysis your work is dependent upon receiving from the Combined Chiefs of Staff the requirements based on our over-all strategy and I shall be in touch with the appropriate authorities to make sure that these strategic requirements are in your hands at an early date. ×4774

Very sincerely yours,

(Sgd)FRANKLIN D. ROOSEVELT

The Honorable
Donald M. Nelson, ×4735
Director, War Production Board.

WAR PRODUCTION BOARD
WASHINGTON, D. C.

OFFICE OF
DONALD M. NELSON
CHAIRMAN

August 7, 1942

Dear Mr. President:

With a view to completing the combined organization needed for the most effective use of the combined resources of the United States and the United Kingdom for the prosecution of the war, you and Mr. Churchill established the Combined Production and Resources Board. You nominated me the American member of this Board.

Mr. Lyttelton came to Washington and together with him, and in cooperation with the Combined Chiefs of Staff, we started the work that the new Board must do if it is to meet the responsibility which you and Mr. Churchill have put on its shoulders. I enclose herewith the first report of the Combined Production and Resources Board, intended for you and Mr. Churchill, describing how the Board is proceeding with its work and what steps it is now taking to perform its task.

I propose, if it has your approval, to circulate this memorandum to the various American agencies whose cooperation is essential if the great task which you have entrusted to us is to be successfully carried out.

Sincerely yours,

Donald M. Nelson

The President
The White House

DRAFT--SUGGESTED REPLY FROM THE PRESIDENT

Dear Mr. Nelson:

I read with the greatest interest the first report of the Combined Production and Resources Board which you sent me, another copy of which, I understand, is being sent to Mr. Churchill. I cannot lay too great stress on the importance, for the successful prosecution of the war, that I attach to the work now being carried out by the Combined Production and Resources Board.

In view of the short time during which the primary task of the Board is to be accomplished, I wish to receive from you progress reports at short intervals, and in any case by the middle of September, indicating to me how far progress has been made in the accomplishment of its objective.

FIRST REPORT OF THE
COMBINED PRODUCTION AND RESOURCES BOARD
PRESENTED TO THE PRESIDENT OF THE UNITED STATES
AND TO THE PRIME MINISTER OF GREAT BRITAIN

SECRET

In order to complete the organization needed for the most effective use of the combined resources of the United States and of the United Kingdom for the prosecution of the war, the President and the Prime Minister decided to establish the "Combined Production and Resources Board".

So as to ensure that the Board would be in a position to take decisions and see that they are carried out, the President and the Prime Minister appointed as the only two members of the Board the Chairman of the War Production Board and the Minister of Production, who have received the necessary authority in their respective countries.

The responsibility allotted to the C.P.R.B. had long been unassigned in the war effort. The nations engaged in producing armament for the successful prosecution of the war against the Axis Powers had been proceeding independently. Meantime, military strategy has increasingly been dealt with on the basis of common judgment and common considerations. If equipment for war is to be ready for military action, in the right amount, of the right kind, in proper balance, and at the right time, it is necessary that the combined production programs of the United Nations be integrated into a total program, based upon the strategic requirements of the war as determined by the Combined Chiefs of Staff.

In consequence, the Combined Production and Resources Board has been charged with the task of "combining the production programs of the U.S. and U.K. into a single integrated program adjusted to the strategic requirements of the war as indicated to the Board by the Combined Chiefs of Staff".

In carrying out its task the "Board" must take account of:

1. The need for maximum utilization of the production resources available to the United Nations.
2. The need to reduce demands on shipping to a minimum.

3. The need to maintain the plant and services essential to the war effort.

4. The essential needs of the civilian population.

It is likewise recognised that if the production of the U.S.A. and the U.K. in 1943 is to be integrated as effectively as possible to meet the strategic requirements, decision must be enforced by October next. Otherwise it will not be possible to take simultaneous decisions which must affect both the combined production and requirements. There is thus a great danger that production in both countries will be set, it will be too late to influence its course, the materials will flow to unnecessary requirements, thus curtailing the production of the essential weapons, and the very purpose for which the Board was created will be missed.

These decisions can only be reached if the Board is clearly informed, in time, as to what the strategic requirements are, and if the many agencies of the two countries whose cooperation is vital are equally clear as to what the Board has to do.

II

The C.P.R.B. by itself cannot be authoritative in all fields of activities, and therefore major reliance must be placed on the various national or combined authorities to help contribute their share. Such agencies as the W.P.B., S.O.S., the Procurement Services of the Army, Navy, and Maritime, the Ministry of Production, the various Supply Ministries in London, and the combined agencies such as the Joint Aircraft, the Combined Raw Materials Board, etc., must retain jurisdiction and authority over the functions within their own sphere.

The function of the Board is always to take the over-all view of the situation, relate the various factors into one picture and thus arrive at the necessary decisions affecting production, decisions that can only be made with knowledge of all the factors, military and civilian, and with the full participation and help of the various agencies. This is imperative since we are in a situation where the requirements are growing and the supply or transportation limited, so that we already have to deal with a deficit and determine where the sacrifices shall be made.

III

The main task before the Board is to relate in time the integrated production of U.S. and U.K. for 1943, to the strategic requirements as indicated

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by the Combined Chiefs of Staff. The major decisions must be taken by October next. To enable these over-all decisions to be taken questions related to particular problems should be cleared by September, the day by which the Combined Chiefs of Staff will, it is hoped, have finished their statement of the Combined Requirements up to the end of 1943.

a) The Board, in conjunction with the Combined Chiefs of Staff, has already started inquiries into the supply and demands for three of the most critical materials: steel plate and ingots, rubber, and copper. The purpose of these inquiries is to show the extent to which Combined Service requirements can be met in the next 18 months.

b) The Board will similarly review in relation to anticipated Service requirements the position of other critical materials.

c) The Board relies upon the appropriate authorities in U.S. and U.K. to keep the requirements under constant review so that the proper relationship between the required quantities of one item with another can be maintained.

d) The Board must review with the competent agencies, including the Shipping Board, the adjustment of the production of the two countries with a view to the possibility of saving shipping.

e) The Board is convinced that it is desirable to secure the maximum standardization of materials and equipment such as bombs and signal and engineer stores. It will therefore request the appropriate authorities to review and report upon these matters from time to time.

f) In order to achieve the maximum possible war production, the Board must satisfy itself that the requirements put forward by the various agencies for indirect military and essential civilian use in the United States and the United Kingdom are in fact the irreducible minimum. In collaboration with the appropriate authorities it will therefore scrutinize critically the requirements which are tabled for these purposes.

Manifestly, at least as rigorous a scrutiny must be applied to requests for materials and machinery for non-military use in others of the United Nations, and in neutral countries which continue to seek fulfillment of their needs in the U. S. and U.K.

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IV

It is vital that all agencies concerned should press forward in collaboration with the Board to bring these matters to a stage at which decisions can be taken by September. When this is done, the way will be clear for the definite determination of the production programs for 1943 in relation to the strategic requirements which will then be available from the Combined Chiefs of Staff.

August 7, 1942

THE WHITE HOUSE
WASHINGTON

C. F.

Combined Production & Resources Board

October 1, 1942.

MEMORANDUM FOR

H.L.H. x4117

Will you read the enclosures and arrange for me to talk the matter over with Admiral Leahy, General Marshall, Admiral King, the Secretary of the Navy, the Secretary of War and yourself early next week? x4189

F.D.R.

Second x4735

Letter to the Pres. from Donald Nelson Sept. 22 re ~~First~~ Report of the Combined Production and Resources Bd., also memorandum from Gen. Marshall re requirements on air ascendancy. x5007

mf

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x249 official

THE WHITE HOUSE

WASHINGTON

Filed by Miss Turner 10/26/42 [illegible]

File Confid

October 22, 1942

MEMORANDUM FOR MISS TULLY:

I have looked into this and it requires no answer or further action from the President.

M.L.H.

COMBINED PRODUCTION AND RESOURCES BOARD
WASHINGTON, D. C.

Dear Mr. President:

In your letter of August 19, acknowledging the First Report of the Combined Production and Resources Board, you asked that a further progress report be made to you as of September 15.

We are, accordingly, submitting this Second Report.

1. The Board has undertaken to bring together a comprehensive statement of the total requirements of the United States and the United Kingdom for military purposes and for non-military purposes, together with the requirements of other non-Axis nations which they may seek to meet out of U. S. or U. K. production, for the eighteen month period ending December 31, 1943.

To this end, the Board has requested the Combined Chiefs of Staff to furnish the Board with a statement of the strategic requirements of the United States and the United Kingdom, and the deficiency military requirements of the various other non-Axis nations, for such eighteen month period. We stated that, for the most effective planning of 1943 production, the statement should be received by September 1. We have also asked the War Production Board to bring together the U. S. domestic non-military requirements for this period, and, with the assistance of the Board of Economic Warfare and the Office of Lend-Lease Administration, export requirements for the United States of raw materials and non-military end items. We have made a parallel request of the Ministry of Production with respect to the United Kingdom.

2. The Board has laid down the principle that domestic non-military requirements, and export requirements for raw materials and non-military end items, shall be cut to the bare minimum compatible with the maintenance of the war effort; and instructions to this end have been issued.

3. We have likewise requested the Combined Raw Materials Board to furnish to us the most recent and best estimates available on the supply of these materials, together with an analysis indicating what steps have been taken, or may usefully be taken before the end of 1942, to increase the available supply.

4. When the information referred to in the preceding paragraphs is received, the requirements will be translated into terms of the chief critical raw and industrial materials needed

for their production; a consolidated balance sheet of requirements and production possibilities in terms of the controlling critical materials will thus be available, and the Board could then work out, in collaboration with the Combined Chiefs of Staff, a balanced and integrated U.S.--U.K. production program, realistically adjusted to the strategic requirements of the war.

5. Under date of September 3, the Board was advised that the statement of strategic requirements requested of the Combined Chiefs of Staff was not yet available; that certain major questions relating to strategic objectives were currently under discussion; and that a statement of strategic requirements must await the determination of these questions.

6. Until the Board receives requirements directly related to strategic needs, it will not have a sound nor an adequate basis for the development of a properly integrated and realistic production program. When such requirements have been received, the Board can undertake, in collaboration with the Combined Chiefs of Staff, to see that they are properly scheduled in relation to the facts and possibilities of production. We should be failing in our duty if we did not call attention to the fact that, until this is done, it is almost inevitable that both material resources and manpower will be wasted or misapplied. The direct consequence of such a misapplication upon the conduct of the war is plain. In addition, it is perhaps not inappropriate to suggest that the suppression of all non-military production except the bare minimum necessary to the maintenance of the economy itself can be justified only in the interest of meeting real military needs.

7. We are proceeding with certain tasks which are related to our primary objective. To the extent that integration, balance and realism can be introduced into a production program on the basis of a consideration of production factors alone, we shall endeavor to do so. As an example, we are concentrating upon measures to bring about the best possible balance of production between items which are interdependent, bearing always in mind the prospective rate of output of the governing items. As a further example, we have requested the War Production Board and the Ministry of Production to report upon measures which are already in effect for the conservation of scarce materials by modification of specifications for both military and non-military equipment, and upon the extent to which such measures may be intensified.

The Board is also making inquiries into the current status of measures to standardize American and British equipment; and we have arranged, and will continue to arrange, for the exchange of missions to deal with specific production problems. A steel mission from the United States to the United Kingdom, sent under the auspices of the Board, has just returned, with a set of recommendations bearing upon the shipment of steel from the United States to the United Kingdom and the utilization of steel facilities in the United Kingdom which we have every reason to believe will be highly useful.

8. In conclusion, we would reemphasize the importance and urgency of our obtaining a statement of requirements directly related to strategic needs. In addition, it would be particularly helpful if any statement of arms and munitions which the Chiefs of Staff desire to have produced by December 31, 1943, would clearly differentiate between arms and munitions needed for operations by forces in zones of combat, and equipment needed at home and for training purposes. x4774 x178

Respectfully,

Donald M. Nelson

Sir Robert Sinclair
on behalf of Oliver Lyttelton

The President
The White House

September 22, 1942

THE WHITE HOUSE

WASHINGTON

C.F. Combined Production & Resources Board

File

DECLASSIFIED

May 10, 1943

MEMORANDUM FOR: RUDOLPH FORSTER

Donald Nelson suggests that we just file and hold this since they are submitting copies to Churchill and Howe.

He said if there is anything from them on it in the way of objections or changes that he will promptly advise us.

M. H. M.

COMBINED PRODUCTION AND RESOURCES BOARD

WASHINGTON, D. C.

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May 3, 1943

RJ
Is there anything further to do on this?

Dear Mr. President:

We have the honor to submit the Third Report of the Combined Production and Resources Board.

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In the First and Second Reports of the Board, emphasis was placed upon the need for prompt determination of the combined production program for 1943. Section I of the Third Report reviews the work of the Board relating to the determination of the American, British and Canadian production programs for 1943. The present need is for immediate planning of the program for 1944.

The Board has been in touch with the Munitions Assignment Board and the appropriate national production authorities on this matter. Ground Army Combat Munitions (Ground Ordnance, Signal Equipment and Military Vehicles) comprise slightly more than one-fifth of the United States production program for 1943, about one-fourth of the United Kingdom 1943 program and about one-half of the Canadian 1943 program. Preliminary inquiry indicates that the capital equipment of the ground forces of the United Kingdom may in the main be completed by mid-1943, and that of the United States by mid-1944. There is every reason to anticipate, therefore, that by mid-1944, a considerable part of the combined resources now devoted to production of ground army equipment will have become available for other uses. At the same time, the need for aircraft and naval and merchant shipping will continue at peak or increase; and other needs such as for transportation equipment, utility equipment and agricultural machinery are likely to show a sharp rise, in part because of previous deferment of maintenance to make way for munitions, and in part because of the urgent requirements which may be expected to grow out of the military occupation of areas now under control of the enemy. These new anticipated

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needs, though not for munitions in the narrower sense, will be of direct and pressing military importance, in that they must be met to enable the armies of occupation to function. The Board will, of course, adhere to the principle that requirements for domestic non-military production in the three countries and exports of raw materials and non-military manufactured items shall be computed on the basis of what is necessary for the successful prosecution of the war.

The change-over which may thus be forecast in types of production between 1943 and 1944 must be undertaken immediately, on a planning basis, if full use is to be made of available resources. In view of the different degrees to which the economies of the three nations have been committed to different types of military equipment, the combined aspect is likely to be of special importance. By prompt planning on a combined basis, the dislocation and loss arising out of the change-over can be reduced to a minimum. As always, production planning depends upon the determination of the requirements. The Board will continue to work with the Combined Chiefs of Staff, the Munitions Assignment Board and the shipping authorities in an endeavor to reach the necessary determinations as early as possible.

While the difficulties of the transition should not be minimized, the Board wishes to emphasize that no overall contraction in war production is in sight. On the contrary, the full resources of the three countries will continue to be required for the war production program. The respective governments will, of course, decide how to explain the origin and significance of the changes to their respective peoples. Steps in this direction have already been taken. Unless a general explanation is given at a suitable time by each government, it may find itself called upon to explain each cutback or shutdown separately, as management and labor,

unaware of the nature of the trend, protest the apparent interruption to production and employment and attribute it to lack of planning or administrative incompetence.

Respectfully,

Donald M. Nelson
American Member

×4735

Sir Robert Sinclair
British Deputy Member

×

E. P. Taylor
Canadian Deputy Member

×

The President
The White House

THIRD REPORT OF
THE COMBINED PRODUCTION AND RESOURCES BOARD
TO
THE PRESIDENT OF THE UNITED STATES,
THE PRIME MINISTER OF THE UNITED KINGDOM
AND
THE PRIME MINISTER OF CANADA

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THIRD REPORT OF THE COMBINED PRODUCTION AND RESOURCES BOARD TO THE PRESIDENT OF THE UNITED STATES, THE PRIME MINISTER OF THE UNITED KINGDOM AND THE PRIME MINISTER OF CANADA.

I. The Production Programs for 1943.

In its Second Report, on September 22, 1942, the Board gave an account of the progress of its efforts to work out, in collaboration with the Combined Chiefs of Staff, a combined American-British production program realistically adjusted both to the combined productive resources and to the strategic requirements of the war, as indicated to the Board by the Combined Chiefs of Staff. Far-reaching adjustments have since been made in the American production program for 1943, and similar revisions have for some time been in process in the United Kingdom. These adjustments have been made by the appropriate national authorities in each case, rather than through combined machinery. But the Combined Production and Resources Board has been one of the principal factors giving initial impetus to the processes of adjustment, and it has contributed substantially to their content and direction. The Board has also helped to maintain a reasonable inter-relationship between the respective national programs.

In September, 1942, the Munitions Assignment Board, by direction of the Combined Chiefs of Staff, transmitted to the Combined Production and Resources Board the respective United States and United Kingdom requirements for the Ground Army, the Air Forces, the Navy and Merchant Ship construction. These requirements were transmitted in the form in which they had previously been established and compiled by the respective Services.

The Board was informed that approval by the Combined Chiefs of Staff of these American and British requirements would depend upon the extent to which they reflected strategic objectives as approved by the Combined Chiefs of Staff; that certain major questions concerning these objectives were currently under discussion; and that approval by the Combined Chiefs of Staff of total requirements programs could not be given with finality until these major questions were decided. Subsequently, under date of October 17, the Board was informed by the Combined Chiefs of Staff that the foregoing compilations of national requirements should be accepted as the basis for production planning. The Board, therefore, had to work on the basis of the several national programs of requirements, rather than a single combined set of requirements. It also had to work within the practical limits imposed by the momentum of the respective national production programs which had been put in process long before the Board was constituted. Fortunately, the task of the Board was facilitated by its composition, embracing, as it did, the Chairman of the War Production Board and the Minister of Production, (and, after November 7, 1942, the Minister of Munitions and Supply) upon whom devolved the primary responsibility for overall national production planning in their respective countries.

With the assistance of the appropriate national departments and agencies, the American and British requirements for end products were translated into terms of the controlling critical materials, carbon and alloy steel, aluminum and copper. The material requirements thus arrived at were set against the best estimates of available supplies. Serious deficiencies were revealed, making it clear that substantial adjustments in the requirements

would be necessary. This information, transmitted to the Combined Chiefs of Staff, reinforced a memorandum which had previously been addressed to the U. S. Joint Chiefs of Staff by the Chairman of the War Production Board, in which he advised that the aggregate of demands for munitions and war construction in 1943 then being made upon United States production exceeded the limits of practicability.

In November, 1942, important revisions were made in the United States production program for 1943. The need for corresponding adjustments in the United Kingdom production program for 1943 had already been apparent to the British authorities, but they could not determine the size or nature of the revision until the extent of assistance which they could expect from American production in 1943 was ascertained. The visit of the Lyttelton Mission to Washington in November led to reasonably definite provision in the United States program for supplies to Britain in 1943. The British authorities were in turn enabled to apportion their manpower for 1943. At the same time substantial changes, growing out of battle experience, were made in the basis of British Army Requirements. During the early months of 1943, the British authorities have been adjusting their production program to take account of all these factors.

The Board has been keeping the revised production programs of the United States, the United Kingdom and Canada under constant review in relation to the supply of critical raw and industrial materials. To this end, it has established, in collaboration with the Combined Raw Materials Board, a Combined Steel Committee, a Combined Copper Committee and a Combined Aluminum Committee. Since the revisions of the programs are still in

process, we cannot yet definitely say whether and to what extent they may still exceed production possibilities. It is certain, however, that the overall balance between the requirements of the three nations and the resources available to them has been greatly improved.

In addition, the Board has been issuing a regular monthly report of combined production, which is made available to the Combined Chiefs of Staff, the Munitions Assignment Board and the Service and production agencies of the three countries. Of the several sections in which the report appears, the main section contains the actual and scheduled production of important munitions, on a combined basis and separately for the United States, the United Kingdom, Canada and the Eastern Group; others summarize the data and give prompt reports on production for the month immediately preceding their issuance; and one analyzes selected features of the combined production and schedules. The report is used in production planning and in assignment by the combined and national production and Service authorities. In consequence, even national decisions independently arrived at can now be based upon a comprehensive knowledge of the combined position, obtainable from the consolidated information thus made centrally available and kept continuously up to date by the Board.

II. Specific Problems.

A. Critical Production Items.

In a number of instances, the Board has been able to assist in meeting specific problems affecting the production of particular items of special urgency in the three countries. There is reason to believe that this phase of the Board's work will increase in usefulness as the primary emphasis in production begins to shift from a vast and comprehensive expansion to the more selective task of developing intensive output of items of special importance.

(1) Escort Vessels

The most important area in which action has been taken to date has been escort vessels. On January 2, 1943, the Combined Chiefs of Staff requested the Board to take every step possible immediately to accelerate and expand the construction of escort vessels. The Board was also asked to advise the Combined Chiefs of Staff on the effect of such action upon other important programs. The Board was able to report the scheduling of additional escort vessel production in the United Kingdom and Canada for 1943, and a planned acceleration of the escort vessel program in the United States. In the process of this investigation the relationship between the rubber program and the escort vessel program was clarified.

Convinced that the best results in production could not be obtained unless arrangements were made to promote standardization of design, the Board recommended to the Combined Chiefs of Staff that there be constituted a Combined Shipbuilding Committee (Standardization of Design) to act as a central coordinating agency in the standardization of shipbuilding design in the United States, the United Kingdom and Canada. The Board acted on its policy of drawing upon the national agencies primarily interested, and recommended that the committee be composed of representatives of the United States Navy, the British Admiralty, the Royal Canadian Navy, the United States Army, the United States Maritime Commission, the War Production Board and the Department of Munitions and Supply of Canada. This recommendation was approved by the Combined Chiefs of Staff on March 5, and the committee has since been constituted under the chairmanship of the Controller of Shipbuilding of the War Production Board.

(2) Locomotives:

The Board instituted an inquiry into the production of locomotives in the three countries, at a time when it appeared clear that the combined

requirements would substantially exceed the then scheduled production program, but before agreement had been reached on the combined military requirements. The immediate effect of the Board's initiative was to bring about the scheduling of increased production in the United States, the expansion of locomotive production in the United Kingdom at the cost of reconversion of some tank capacity, and the scheduling of production of locomotives for India in Canada.

(3) Trucks:

In November, 1942, the Board created a Truck Committee, to investigate and make recommendations concerning the distribution of production of wheeled transport vehicles among the United States, the United Kingdom, Canada and other parts of the British Empire; to review the relation between tire and vehicle programs and make recommendations as to the best source of supply for maintenance tires; and to examine the entire spare parts situation and make recommendations as to the planning of future production of spares on a scale necessary to service new vehicles adequately and to reduce to a minimum the vehicles immobilized for lack of spares. The membership of the Committee included Mr. Arthur B. Newhall, of the staff of the Combined Production and Resources Board, (Mr. Newhall was subsequently appointed Executive Director of the Board) as Chairman, and on the American side, the Director of the Automotive Division of the War Production Board, a representative of the Office of the Rubber Director, and a representative of the Army Service Forces; on the British side, the Director of Mechanization of the Ministry of Supply, the Director Controlling Vehicle Spares and Repairs of the Ministry of Supply, a representative of the British Supply Mission in Washington, and a representative

of the War Office; and on the Canadian side, the Coordinator of Production of the Department of Munitions and Supply, the Director-General of the Automotive Production Branch of the Department of Munitions and Supply and a representative of the Wartime Industries Control Board. On request of the Board, the Combined Shipping Adjustment Board named two representatives to consult with the committee on questions relating to shipping.

The Truck Committee addressed its initial efforts to the urgent spare parts problem and, in December, 1942, submitted to the Board a proposed policy for the procurement of spare parts for 'non-standard' vehicles of United States manufacture. The report was subsequently approved by the Board and, on recommendation of the Board, by the Combined Chiefs of Staff, and the policy is currently being given effect by the appropriate national authorities. The balance of the committee's inquiry was divided in two parts. The first was a study of the packing of motor vehicles for overseas shipment and subsequent assembly of vehicles at destination; the second, a study of combined total requirements for motor vehicles and combined total production capacity. A report on each of the above studies has been approved by the Board and transmitted to the Combined Chiefs of Staff.

As the work of the committee progressed, certain of its recommendations were agreed to by representatives of the three countries and put into effect without waiting for the final reports of the committee. The Board feels that employment of this method in appropriate cases makes the work of its committees more immediately useful.

(4) Consumption of Rubber:

The establishment of the Truck Committee followed a comprehensive inquiry into the rubber position. In the fall of 1942, stocks of crude rubber in the United States, the United Kingdom, Canada and the British Empire were substantial, and there was reason to anticipate a large production of synthetic rubber commencing the latter part of 1943. At rates of consumption then current and scheduled, there was every prospect that the stocks of crude rubber would be seriously depleted by the middle of 1943, before the output of synthetic rubber could be expected to achieve momentum. It was, in consequence, imperative to eliminate non-essential uses of rubber in the three countries, and to plan the essential consumption of rubber on a combined basis and with the utmost care.

The production of tires for trucks was plainly of the first importance in this matter, and the Board instituted its investigation into the truck position. Pending completion of this inquiry, the Board, after receipt of detailed reports from the United States and the United Kingdom, agreed upon a statement of principles and procedure to govern the rubber-using production program from the fall of 1942 to June 30, 1943, and requested the Combined Raw Materials Board, the Chairman of the War Production Board and the Minister of Production to allocate rubber accordingly. The Board's decision provided that overall consumption of crude rubber should be held to a rate which would not reduce the combined stock of crude rubber on June 30, 1943 below an agreed minimum. Figures were also agreed for the consumption of crude rubber in the United Kingdom, and in the rest of the Empire (excluding Canada). Consumption in the United States and Canada

was fixed at a rate sufficient to cover requests currently expressed to the Chairman of the War Production Board through the Requirements Committee, subject to adjustments reflecting a downward revision in the truck production schedules of the United States Army Supply Program, and modifications, in the light of available shipping, of the scheduled production of trucks for British account in the United States and Canada. An allowance was made for the continuing supply of crude rubber to the U.S.S.R. To take account of changes, provision was made for a quarterly review of the position. The latest review indicates that the recommended minimum stock position for the end of June, 1943 will be exceeded.

B. Miscellaneous Problems:

A large number of miscellaneous problems of varying character and importance have been submitted to the Board by interested combined and national agencies, and have been settled. Among the more important of these are the following:

(1) Economy of Shipping through local supply arrangements for United States Forces in the United Kingdom.

Questions raised initially by the Anglo-American Coordinating Committee in London with the London Committee of the Board led to an extended inquiry by the Board into policies and procedures affecting the local supply of the United States forces in the United Kingdom.

In general, it seemed clear to the Board that every effort ought to be made to supply the forces of the United Nations from the

sources involving the smallest net employment of shipping. In order to achieve economy in shipping through local supply arrangements for American forces in the United Kingdom, arrangements had to be made to cover the mutual adjustments in production which would often be necessary. Since assignment policy had a direct bearing on the extent to which any such arrangements could be carried, the Board invited the Munitions Assignment Board to join with it in an examination of the problem. Agreement was reached upon the following procedure:

In arranging for the supply of American forces in the United Kingdom from local sources, the form of adjustment in the combined production--i.e. whether in the form of raw materials or finished stores and whether direct to the country concerned or to other theaters--would be settled by joint discussion by the responsible supply agencies. Both the approximate date and the form of adjustment would be decided (on a planning basis) at the time when provision was made for the original transfer. The tentative arrangements thus established would be accomplished in assignment unless at variance with strategic considerations. If possible, the great majority of cases would be dealt with by ad hoc agreements on the ground by the representatives of the Services concerned, advised as may be necessary by the production and shipping interests affected. Only major questions of policy would be referred to the Munitions Assignment Board or the Combined Production and Resources Board, as the case might be.

(2) Non-programmed Items in International Aid:

During the summer of 1942, continuing difficulties had arisen with respect to the procurement by the British of non-programmed

items in the United States. Non-programmed items were items of military equipment the need for which could not be anticipated in time for incorporation in the successive revisions of the U. S. Army Supply Program. In consequence, requisitions for such items had to be presented as the need arose; and, as the programs themselves grew larger, the task of satisfying the requisitions became increasingly troublesome. In November, 1942, the Board approved a plan for dealing with non-programmed items requisitioned by the United Kingdom. The plan called for the establishment of a reserve of critical raw materials against which materials obligated for non-programmed requirements presented during any particular quarter would be drawn. Necessary adjustments would be made at the end of each quarter. The previously established procedure which compelled a 'down-rating' within the same group or classification for each non-programmed item proposed was discontinued. The War Production Board, the War Department and the Office of Lend-Lease Administration, and the British Supply Mission in Washington, have since been proceeding in accordance with this arrangement.

(3) Priority Rating Policy for Exports:

At its very first meeting, the Board had resolved that priority ratings for components and weapons of non-common type procured by the United Kingdom in the United States, and necessary for the completion of the British munitions production program, should be equivalent to the ratings assigned to United States weapons for forces of equivalent strategic importance. This resolution had been agreed to by the Combined Chiefs of Staff. In October, the Board extended the application of the principle of equivalent rating to non-military end items and to components and materials specifically

identified with particular groups or classes of non-military end products.

(4) Combined Export Markets Committee--Finished Goods:

To coordinate American and British programs for the export of non-military manufactured goods to third countries, there has been constituted, under the auspices of the Department of State, a Combined Export Markets Committee--Finished Goods, of which a representative of the Department of State is Chairman, and the other members are representatives of the Office of Lend-Lease Administration, the Board of Economic Warfare, the Foreign Division of the War Production Board, the U. S. Department of Commerce, the British Embassy and the British Board of Trade Delegation in Washington. By letter of December 23, 1942, the Department of State suggested that this Committee should be brought within the framework of the Combined Production and Resources Board. After consultation with the Department and others of the agencies participating in the work of the Committee, the Board concluded that it should receive only cases of certain types from the Committee, and that these should be dealt with in accordance with the following procedure:

1. If agreement has been reached by the Committee upon the authenticity of a requirement, but the Committee is unable to agree upon a source of supply to which the requirement may be presented, the Committee may submit the question to the Board. In such a case, the Board will determine to which national production agency or agencies the requirement should be presented for consideration, and will inform the Committee.

2. If agreement has been reached by the Committee upon the authenticity of a requirement, and such requirement has been presented to a national production agency (selected either by agreement within the

Committee or in accordance with paragraph 1), and if such national production agency declines to make provision to meet such requirement, the Committee may request a review of the case by the Board. If, in the judgment of the Board, the case involves problems of combined production planning, the Board will take jurisdiction and make a decision.

The Department and the Committee concurred, and the procedure outlined has been put into effect.

(5) Exchanges of Technical Personnel:

The visit of the United States Steel Mission to the United Kingdom in September, 1942, was followed by that of British experts familar with materials distribution to the United States, to consult with officers of the War Production Board who were setting up the Controlled Materials Plan for the distribution of materials. In the spring of 1943, technicians from the Steel Division of the War Production Board visited England in connection with requirements matters, and a British Metallurgical Mission arrived in the United States to collaborate in technical studies on the use of alloys and similar problems. Studies have been made in England by representatives of American production authorities of certain petroleum and chemical problems. One result has been to assist in arrangements by which the supply of benzol in the United States, used in the manufacture of high octane gasoline and synthetic rubber, is being supplemented by the shipment of substantial quantities from the United Kingdom.

III. Addition of Canada to Membership.

On November 7, 1942, by agreement among the President of the United States, the Prime Minister of the United Kingdom and the Prime

Minister of Canada, the Minister of Munitions and Supply of Canada became a member of the Board. Mr. Edward P. Taylor was appointed his Deputy. Canadian participation has facilitated the work of the Board and, we are confident, will enhance its usefulness.

IV. Developments in the Organization of the American Section of the Board.

The composition of the Board reflects a recognition of the simple fact that it cannot be fully effective unless it is rooted in the respective national production agencies. The pattern has been carried forward in several organizational steps directly affecting the American Section. In December, 1942, there was established within the War Production Board a Production Executive Committee consisting of the Executive Vice Chairman of the War Production Board, who is Chairman of the Committee; the Commanding General, Army Service Forces; the Commanding General, Materiel Command, Army Air Forces; the Chief of Procurement and Material, Navy Department; the Assistant Chief, Bureau of Aeronautics, Navy Department; the Vice Chairman of the United States Maritime Commission; and the Program Vice Chairman of the War Production Board.

On February 19, 1943, the Executive Vice Chairman of the War Production Board, Mr. C. E. Wilson, was appointed U.S. Deputy Member of the Board. On March 26, Mr. Wilson named Mr. William L. Batt as his representative on the Board. Mr. Batt will also sit with the Production Executive Committee of the War Production Board, of which Mr. Wilson is Chairman. These steps have greatly strengthened the operating interrelationships between the Combined Production and Resources Board and the War Production Board and the American procurement services.

The Board keenly regrets to report its loss of the services of Mr. James S. Knowlson, who resigned as U. S. Deputy Member on January 8, 1943. It wishes to record its appreciation of his creative contribution to the establishment and work of the Board.

V. Internal Organization of the Board.

A. The Executive Director:

On March 26, 1943, the Board created the position of Executive Director of the Board. The Executive Director will be responsible to the members of the Board and their deputies collectively. He will supervise and control the work of the staff of the Board other than the officers of the Board and the personal assistants of the members and their Deputies.

B. London Committee of the Board:

There has been established a London Committee of the Board, the members of which are Mr. Lyttelton, the British member of the Board, and Mr. W. A. Harriman, London Representative of Mr. Nelson. Within the general framework of principles approved by the Board, the London Committee deals with those aspects of the work of the Board which are most conveniently handled in London, especially where detailed examination of the facts of United Kingdom production is involved. It considers and makes recommendations on proposed adjustments in United Kingdom production programs which arise in connection with combined production planning by the Board; makes recommendations from time to time to the Board in the field of combined production planning; serves as a means by which preliminary consideration can be given in London to combined production problems arising out of the work of the British Joint War Production Staff; acts as a link between the Board and the Commonwealth Supply Council and other authorities in London in questions

affecting the productive resources and requirements of British countries (other than the United Kingdom and Canada); and deals with such other matters as may be agreed upon from time to time by the members of the Board.

C. Other Standing Committees of the Board:

The Board has established a standing committee on Non-Military Supplies; and, in collaboration with the Combined Raw Materials Board, standing committees on Steel, Copper and Aluminum.

(1) Non-Military Supplies Committee:

The Non-Military Supplies Committee was established to assist the Board in its efforts to assure that the combined resources available for supplying the needs of the civilian population shall be held at the minimum necessary for the successful prosecution of the war; to make recommendations to the Board as to the combined productive capacity that should be devoted to particular non-military articles; and to make recommendations to the Board as to the distribution of non-military production among the United States, the United Kingdom and Canada. Work is already actively under way on the combined planning of medical supplies and textiles, for which subcommittees have been created. Numerous other items are under preliminary study. Comprehensive reports on the state of the civilian economy in the United States and the United Kingdom have been received, and these will be of assistance in the determination of the appropriate production levels for non-military supplies.

The membership of the committee reflects the policy of the Board to draw upon existing agencies. The Chairman, the Deputy Chairman and the Secretary are drawn from the staff of the Board; the other members include representatives of the Program Vice Chairman of the War Production

Board, the Office of Civilian Supply of the War Production Board, the British Supply Mission, the British Board of Trade Delegation, the Wartime Prices and Trade Board of Canada and the Department of Munitions and Supply of Canada. Membership of the subcommittees is also drawn from the national agencies concerned, the United Kingdom and Canada sending to Washington at the appropriate time representatives having detailed knowledge of British and Canadian production. The interchange of information and experience during the examination of these problems also leads to increased production efficiency in the three countries.

(2) Committees on Copper, Steel and Aluminum:

As already indicated, the Board has established, in collaboration with the Combined Raw Materials Board, standing committees on steel, copper and aluminum, to assist the Board in keeping the inter-relationship of combined supply and requirements continuously under review, and to facilitate the exchange of technical data.

D. Combined Registry:

The Board has established a Combined Registry to serve as a unified and complete record and message center. Since this appears to have no exact precedent, a brief description may be useful. Initially, the customary difficulty was encountered, that many of the documents of actual or potential interest to the Board embodied communications between the respective national sections of the Board and the corresponding national production, Service or shipping authorities, and had to be recorded for national purposes. To meet the situation, a single set of files was organized, with four main subdivisions, Combined, American, British and Canadian, and a comprehensive cross-reference control. The files and message

center are under the supervision of a single Registrar, whose responsibility is combined, and who reports to the Executive Director. He is assisted by a British and a Canadian registry liaison officer, who have immediate supervision of relations with the private offices of the British and Canadian Deputy Members. The Registrar attends himself to liaison with the private office of the American Deputy Member.

VI. Outline of Board's Activities During the Months Ahead.

At its sixteenth meeting on March 26, the Board considered the advisability of defining, for the guidance of its officers and staff, the areas of activity within which its work should be concentrated during the months ahead. Such a general direction appeared to be desirable, and it was resolved that, in addition to pending tasks and subject to such further instructions as the Board might from time to time give, the work of the Board and its officers and staff should be primarily concentrated in the coming months on the following categories of activity:

1. The Board will assemble the production data necessary to keep up to date the overall picture of production possibilities measured against requirements, military and non-military, and will cause to be prepared at 6-monthly intervals an analysis of the general position. The first analysis will be submitted to the Board not later than July 1, 1943.

2. Whenever the Board may find on examination of current data that there appears to be, on a combined basis, a deficiency or excess of materials, facilities, components or manpower, in relation to established production programs or requirements, it will bring the need for making

adjustments to the attention of the appropriate national production and Service authorities, with such recommendations as may be appropriate, and collaborate with them in working out the necessary adjustments.

3. The Board will coordinate, and seek to bring about the expansion of, the interchange of technical data and experience among the United States, the United Kingdom and Canada, by promoting reciprocal technical missions, establishing combined committees on specific problems and other similar means. In doing so, it will not normally act itself as the channel through which such information is exchanged, but will keep in touch with procedure and will encourage and assist such interchange between the production and Service authorities in the three countries.

4. The Board will carry forward its work on non-military supplies to ensure that the productive resources of the United States, the United Kingdom and Canada which are devoted to civilian requirements are held at the minimum necessary for the effective prosecution of the war by the United Nations, and to work out the soundest possible distribution of such production among the three countries. In this connection, the 'minimum necessary' must take account of the essential requirements of re-occupied countries.

5. The services of the Board shall at all times be available for the investigation of specific production problems on which any of the national authorities concerned may desire extra-national aid; and whenever the Board may be aware of the availability of equipment, components or materials in any one of the three countries which might be used to solve production problems in any of the other countries, it will bring the

possibilities to the attention of the appropriate national authorities, and give them such assistance as may be appropriate.

In this connection, the Board stressed the importance of maintaining the closest possible working relationship with the Combined Chiefs of Staff and the Combined Munitions Assignment Board, and other combined and national Service, production and shipping agencies.

April 30, 1943

COMBINED PRODUCTION AND RESOURCES BOARD
WASHINGTON, D. C.

SECRET

March 24, 1944

C.F. Combined Production and Resources Board

The President
The White House

My dear Mr. President:

I am enclosing for your information a report on the status of the combined production programs of the United States, United Kingdom and Canada as of December 31, 1943. This is the second of a series of semi-annual reports prepared under the supervision of the Executive Director of the Combined Production and Resources Board.

x 48
x 48-B

Respectfully yours,

Donald M. Nelson

x 5009

Enclosure

COMBINED PRODUCTION AND RESOURCES BOARD
WASHINGTON 25, D. C.

September 6, 1944

C. F. Combined Production & Resources Board

file

The President
The White House

My dear Mr. President:

You will find enclosed for your information a report on the status of the combined production programs of the United States, United Kingdom and Canada as of July 1, 1944. This is the third of a series of semi-annual reports prepared under the supervision of the Combined Production and Resources Board. I hope you will find it of some value.

x48
x48-B
x5007

Respectfully yours,

William L. Batt

W. L. Batt

Enclosure

THE STATUS OF
COMBINED PRODUCTION PROGRAMS
AS OF JULY 1, 1944
UNITED STATES, UNITED KINGDOM, AND CANADA

THIRD SEMI-ANNUAL STAFF REPORT

Prepared under the supervision of E.A. Peyser, Executive Director
Morris A. Copeland, Editor
Editorial Committee: R.G.D. Allen, A. McDougall,
R. W. James, Emerson Ross, Peter M. Rouzitsky

COMBINED PRODUCTION AND RESOURCES BOARD

~~Secret~~

August 15, 1944

Combined Production and Resources Board
Washington, D. C.

Gentlemen:

In accordance with your directive of March 23, 1943, it is the duty of the Executive Director to prepare and submit to the Board a progress report at six-month intervals. I therefore submit the following report which is the third semi-annual report on the combined production programs of the United States, the United Kingdom, and Canada.

This report describes as concisely as the nature of the subject matter permits the major production programs of the three countries as of July 1, 1944, and brings the previous report up to date. Wherever practicable in view of the time necessarily taken in its preparation this report incorporates developments subsequent to July 1, 1944. Moreover, it indicates the increasing complexity and range of the problems with which the Board is concerned.

Many members of the combined staff of the C.P.R.B. have contributed to various portions of this report but the major part of the work has been done by the Editor, Dr. Morris A. Copeland, the members of the Editorial Committee, Miss Dorothea Gray and Mr. Albert H. Huntington.

Respectfully submitted,

E. A. Peyser
Executive Director

CONTENTS

CHARTS

CHAPTER I

THE PRODUCTION TURNING POINT

1. As of January 1, combined munitions production was scheduled to rise slightly to a mid-year peak. Actually munitions output during the first half of 1944 was maintained at barely the 1943 year-end rate. It is now scheduled to rise 6 percent from the second quarter level to a peak in the fourth quarter.

2. Rising and difficult programs include such important military items as a number of types of aircraft (especially longer-range bombers and powerful newer-type fighters), airborne radar, heavy artillery and artillery ammunition, bombs, and heavy trucks. Some leeway for meeting these rising programs is afforded through release of manpower from declining programs and by improved output per man-hour. In view of the extent to which the capacities of the three economies have already been taxed and the continuing manpower drains into the armed forces, vigorous production effort is called for. No considerable increase in output for civilian home consumption will be possible in the immediate future. The endeavor to meet production programs for munitions and essential nonmilitary-type items such as coal and textiles must continue without relaxation.

3. Any major change in the present production outlook must be contingent upon military operations. Nevertheless, progress in those operations to date has been such that planning for munitions production cut-backs, contingent on the collapse of the Axis in Europe, is a present necessity.

4. Just as military production planning has wisely set munitions requirements at levels sufficient for eventualities worse than those that seem most likely, so reconversion planning should be prepared for the possibility of deeper cut-backs after victory in Europe than present military planning suggests, or for an earlier date of Germany's capitulation. Thus there is need to meet present production schedules and at the same time to prepare for the production turning point ahead.

5. As soon as Germany is defeated combined war production requirements will be substantially reduced. It is anticipated that special "planning" programs for aircraft, ordnance, and other important munitions will be ready to be introduced on German collapse; these will make possible the prompt translation of reduced requirements into lowered production schedules. The over-all level of combined munitions production is likely to decline within less than a year after victory in Europe by at least 30 percent, possibly by as much as 50 percent. The ground army and merchant ship production programs will be cut most, the naval vessel and aircraft programs somewhat less.

6. It is estimated that a 30 percent cut in U.S. munitions production levels would directly or indirectly release about 4 million workers. Allowing on the one hand for a release of 1½ million from the armed forces and on the other hand both for substantial withdrawals from the labor market and for some increase in between-job unemployment, it is estimated that there might be a net addition of 3½ million workers to the labor force now available for non-war production. A 30 percent over-all cut in U.S. munitions production would make about 5 million non-war workers available. Less detailed estimates are at hand for the U.K. and Canada. Assuming again a 30 percent cut, the net number of workers made available for non-war production would probably exceed a million in the U.K. Because of Canada's greater concentration on ordnance, a combined over-all reduction of 30 percent in munitions output might mean a deeper cut for Canada, and might make

available nearly half a million non-war workers.

7. After victory in Europe a wide variety of long-range international economic problems will call for consideration. These will, it is assumed, be considered through established diplomatic channels, through international conferences, and in some instances, through new forms of international organization. Among these international economic problems are: (a) the extent of financial and other provision for reconstruction and development in various liberated areas, (b) the economic development to be permitted in ex-enemy countries, and the possibility of transplanting of industry and materials controls as a means of enforcement, (c) the possible use of German resources to provide goods for relief and rehabilitation, for other immediate civilian needs of the United Nations, and for the war with Japan, (d) the size and nature of other reparation arrangements and their possible repercussions, (e) the disposition of property rights of nationals of ex-enemies, (f) the relaxation of shipping controls and the organization of international aviation and shipping, (g) international commercial policy and international commodity agreements, (h) international monetary and investment mechanisms, (i) the settlement of inter-allied accounts, (j) international agricultural and labor problems, including full peace-time employment and economic stability.

8. Of more immediate and direct concern to the C.P.R.B. are the problems of maintaining war production on a diminished level and at the same time carrying through a partial reconversion. The problems of reconversion and readjustment which the U.K. will face and those confronting Canada and the U.S. contrast sharply. In part this contrast arises from differences in the forms of previous conversion from peace to war. The U.K.'s great war effort has been achieved, not only by severe depression of civilian consumption standards, but also by extensive disinvestment abroad as well as at home, interruption of the flow of exports, and loss of shipping, i.e., by jeopardizing the means of payment for the imports on which the British economy is so dependent. Internally, capital depletion through virtual cessation of replacements has been accelerated by extensive devastation from bombing. In the U.S. and Canada, on the other hand, war production has been made possible to a larger extent by fuller use of resources and the increase in total output. A second major factor has been the discontinuance of capital replacements and of the output of many durable goods. Because of this and of specific wartime capital additions, both the U.S. and Canada will end the war with a somewhat larger stock of capital goods than when they entered it, but with a stock that is poorly balanced for purposes of peace-time producton.

Munitions program cut-backs after victory in Europe will release a substantial volume of resources in all three countries. In the U.S. and Canada it is probable that the releases will be sufficient to permit resumption of the production of most civilian durable goods at pre-war levels. It should even be possible to produce automobiles at a rate comparable to that of the 1930's, and to carry on a substantial, though less than the pre-war, volume of construction. Relaxation of a large part of the materials and labor controls is likely. Reconversion will present many serious problems, e.g., the release of some private facilities while retaining competitors in war production. But, in general, there will be a shift away from problems of deficits and allocations, toward problems of full employment under free enterprise including the minimizing of transitional unemployment and possibly toward the problems of a business boom.

In the U.K. the level of civilian production is much lower in relation to pre-war than in the U.S. or Canada, and the need to raise it is correspondingly greater. It is unlikely, though, that sufficient resources will be released after victory in Europe to permit a full resumption of pre-war civilian production levels. Consequently, materials and labor controls, for the most part, will have to be continued for a considerable

period. These controls will need to be employed to settle the difficult questions as to the type and extent of improvement to be permitted in the depressed standard of living and the extent of rebuilding of the depleted stocks of capital goods of various types. Reconversion will be planned reconversion rather than an immediate reversion to free enterprise.

There is another point of sharp contrast in reconversion problems. Although the British Commonwealth of Nations is as nearly self-sufficing as the U.S., the U.K. alone is very dependent on external trade. Because of this, the readjustment of exports and imports toward a workable basis will be as essential a part of its reconversion problems as internal trade readjustments will be for the U.S. Import and production controls will necessarily be exercised in order to revive and build up exports, both visible and invisible, to a level which will support the volume of imports essential to the operation of the economy of the U.K.

The proportionately larger volume of civilian production to be restored, the greater dependence of the U.K. economy on external trade, and the prospective continuation of deficits in many items all contribute to the contrast between reconversion in the U.K. and reconversion in the U.S. and Canada. But problems of disposal of government facilities and of surpluses, of contract liquidation, and of releasing some facilities ahead of others will be common to all three countries.

9. To a large extent, each of the three member countries of the C.P.R.B. will meet the problems of partial reconversion after victory in Europe in its own way. Nevertheless various aspects of these problems call for combined consideration. Three phases of the production outlook after Germany's collapse may be commented on briefly:

(a) Military requirements after victory in Europe will still call for a very large munitions production program, and that program will still be a "must" program. To meet it will not be easy. There will be need to maintain morale among munitions workers and to prevent excessive withdrawals of personnel from munitions employment to more permanent civilian work. There will be need also to dispel concern in each country lest another gain competitive advantage in world markets by more rapid relaxation of wartime controls.

(b) Manpower, materials, and facilities released from munitions programs will need to be converted as rapidly and as smoothly as possible to civilian uses so as to achieve the maximum civilian production which decreases in military programs permit. At the same time, problems of contract termination, surplus property disposal, and the disposal of government-owned facilities will need to be dealt with. Combined attention may well be given to the relative levels of civilian consumption in the three countries, since these levels will in part be determined by the international distribution of required munitions production programs and the extent to which transfers of munitions from North America to the U.K. and other Allies are continued.

(c) There will be extensive additional civilian requirements after victory in Europe. Among these will be the urgent needs of liberated areas for relief and rehabilitation. Since there will be strong pressure for increased supplies for domestic civilian consumption and normal export trade, and since the countries which are at present importing a wartime minimum will be anxious to obtain larger supplies, it is clear that for many items there will still be difficult problems regarding the relative urgency of competing requirements. On critical items combined action will continue to be necessary.

10. As victory in Europe approaches the activities of the C.P.R.B. will inevitably change. The broad object of C.P.R.B. policy will remain—the coordination of combined resources in the prosecution of the war. But different criteria will apply and different problems will arise under the conditions of a one-front war. Shifts in the list of

critical commodities will condition the C.P.R.B.'s operations. The resources of a much wider group of countries will need to be coordinated, and there will be more countries with needs to be met. In Europe, there will be the liberated members of the family of United Nations, the countries which have remained neutral, and finally Germany and her satellites. As civilian production and trade increase there will be increasing reason to take account of the resources and needs of other United Nations. The day-to-day activities of the C.P.R.B. in the period after the collapse of Germany will, as now, in general take the form of recommendations to national agencies. But coordination with many countries and the presentation of facts and recommendations to international groups will increase in importance.

Moreover, the C.P.R.B. will give an increasing share of its attention to reconversion and to relief and reconstruction. It is a natural channel for the exchange of information on policies and methods of industrial reconversion in the various countries. The C.P.R.B. and its committees will have an immediate interest in many longer-range plans involving fundamental questions of national policy, will consider their implications, and may, from time to time, make recommendations regarding them. The problem of surplus stocks of munitions and other commodities has international ramifications which will concern the C.P.R.B. among other agencies. The availability of supplies both for the relief and for the reconstruction of liberated areas will be a major matter of concern, and the resources to be taken into account will, of necessity, include those of Europe as a whole, Germany and her satellites not excluded.

The methods by which the C.P.R.B. will operate in the one-front stage of the war will depend a good deal on the organization of the national agencies in the U.S., the U.K., and Canada, and on the degree of control and planning exercised by these agencies.

CHAPTER II

THE COMBINED MUNITIONS PROGRAM

Six months ago, aircraft and landing vessels were the outstanding expanding programs while schedules for ordnance and combat vehicles were declining. The past few months have witnessed numerous changes in program. At first almost all changes were cut-backs; more recently, however, many items have been reinstated or stepped up. As a result, the first-of-the-year position has been almost completely reversed. The combined aircraft program has been progressively reduced until, as of mid-1944, little or no increase in deliveries (by weight or value) is scheduled until the last quarter of 1945. The landing vessel program reached its peak in May and is now declining. On the other hand, increased requirements, combined with the fact that output had been previously reduced to a relatively low level, have made ordnance and military vehicles a rapidly expanding program from now at least until the end of 1944. This is particularly true of the U.S., where, compared with June production levels, the gun program rises by nearly 10 percent, ammunition by nearly 35 percent, and combat and motor vehicles (including tank conversions) by more than 25 percent.

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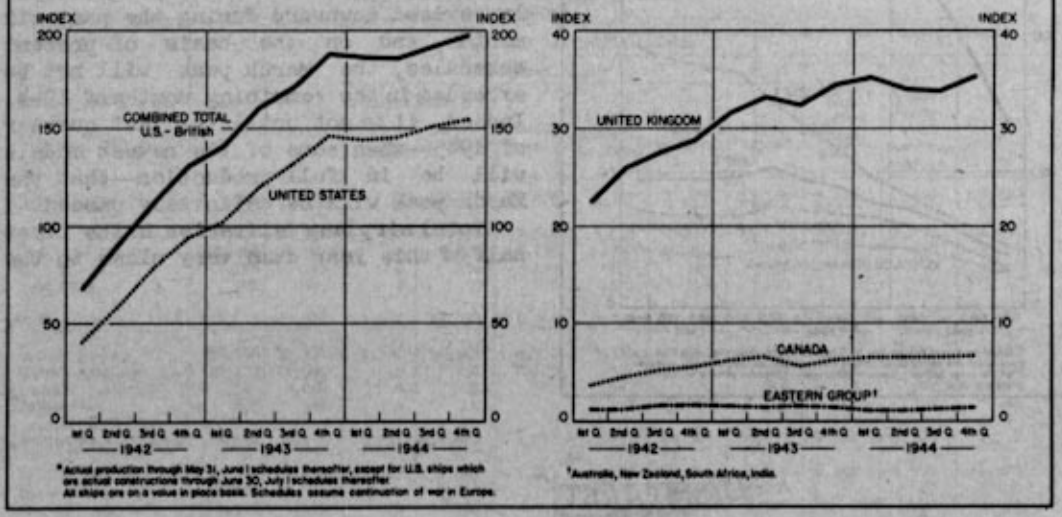
CHART I

COMBINED MUNITIONS PRODUCTION*

AIRCRAFT, SHIPS, ORDNANCE, COMBAT AND MOTOR VEHICLES

COMBINED RATE IN 1942 = 100



* Actual production through May 31, June schedules thereafter, except for U.S. ships which are actual constructions through June 30, July schedules thereafter. All ships are on a value in place basis. Schedules assume continuation of war in Europe.

† Australia, New Zealand, South Africa, India.

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Table 1.—SELECTED COMBINED MUNITIONS PROGRAMS, 1943-1945

ITEM	Unit	1943 Actual	1944 As of Jan. 1	1944 As of July 1	1945 As of July 1
Military airplanes	Each	113,949	142,879	132,675	125,657
Major combat vessels	Thousand SDT	948	1,127	979	1,178
Landing vessels (U.S. only)	Thousand LDT	795	1,592	1,553	1,178
Merchant vessels	Thousand DWT	22,072	19,258	17,899	19,583 a/
Medium tanks	Each	21,246	13,717	14,045	*
Ground gun ammunition over 105-mm	Thousand	8,065	7,050	11,873	28,814
Ammunition for 105-mm howitzer and 25-pdr.	Thousand	30,205	48,241	50,128	77,045
Aircraft bombs	Thousand Short Tons	1,799	1,398	2,113	*
Military trucks, 4 tons and over b/	Each	42,302	66,925	67,689	*

Note: Schedules assume continuation of war in Europe.
a/ First half only; U.S. and Canadian programs for the second half of 1945 are not yet firm.
b/ Data as shown in the Consolidated Production Summary. * Not available.

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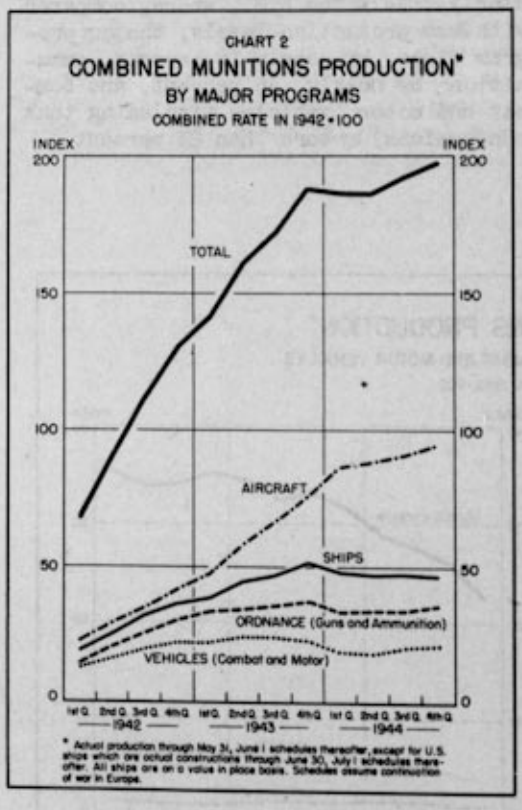

Table 1 summarizes the position of certain important munitions programs, assuming continuation of war in Europe, and the remainder of the chapter consists of a short treatment of the problems in the main munitions categories.

AIRCRAFT

More than 68,000 military airplanes were produced in U.S. and British factories during the first six months of 1944. Combined airplane production from September 1939 to the end of June 1944 was approximately 325,000.

The combined output of military airplanes reached a peak in March 1944, rather more than three times (by weight or value) the average rate of production in 1942. Programs have been progressively revised downward during the past six months, and on the basis of present schedules, the March peak will not be exceeded in the remaining months of 1944. Indeed, it is not until the last quarter of 1945—when some of the newest models will be in full production—that the March peak will be definitely passed.

Total airplane deliveries in the first half of this year came very close to the

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TABLE 2.—THE COMBINED AIRCRAFT PROGRAM
HIGH PRIORITY AIRPLANES
(Unit - Each)

TYPE OF AIRPLANE	1944 First Half Actual	1944 Second Half July 1 Schedule	1944 Total	1945 July 1 Schedule
Bombers				
U.S. B-29 Superfortress	392	948	1,340	4,250
B-32 (Consolidated)	0	51	51	950
B-17 Flying Fortress	3,045	2,498	5,543	2,600
B-24 Liberator	6,097	4,526	10,623	4,145
PV-2 Harpoon	9	319	328	805
A-26 Invader	104	659	763	4,849
SB2C Helldiver	1,327	1,800	3,127	3,600
TBM Avenger	1,596	1,750	3,346	3,600
U.K. Lancaster	1,427	1,728	3,155	4,509
Halifax	1,249	1,212	2,461	2,459
Can. Lancaster	65	138	203	430
Helldiver	215	591	806	1,560
Fighters				
U.S. P-38 Lightning	2,031	2,405	4,436	5,713
P-51 Mustang	2,800	4,118	6,918	8,034
P-47 Thunderbolt	3,756	3,600	7,356	7,200
F4U (FG) Corsair	3,060	2,262	5,322	3,545
F6F Hellcat and F8F	3,056	2,769	5,805	6,009
FM Wildcat	1,720	1,800	3,520	3,600
U.K. Mosquito a/	1,080	1,288	2,368	2,727
Meteor	8	24	32	492
Spitfire	2,518	2,757	5,275	4,654
Spiteful	0	40	40	1,119
Tempest	182	861	1,043	2,760
Seafire	343	583	926	1,461
Can. Mosquito b/	194	373	567	1,171
Transports				
U.S. C-54 Skymaster	109	343	452	1,430
C-46 Commando	376	963	1,339	3,080
C-47 Skytrain	2,842	2,110	4,952	3,744

Note: Schedules assume continuation of war in Europe.
a/ Including bomber version and Hornet (1945).
b/ Including bomber version.

schedules of January 1. The problem now, however, is not so much to meet the over-all schedule but rather to produce the most urgently needed models and to supersede in volume production the obsolescent types with newer and more efficient ones. Table 2 shows the current program for airplanes of high priority.

There are steeply rising programs for particular models which will be hard to meet in the second half of 1944 and even in 1945. Such U.S. types as the B-29 long-range bomber, and A-26 attack bomber have been in production difficulties in the past, though deliveries to date represent, in general, a satisfactory achievement. It is certain that further hurdles will need to be surmounted before full production is attained. This is also true of the Tempest fighter and of a few other British types. The U.K. program for the next 18 months, however, is primarily determined by present and future manpower allocations to the aircraft industry. The tight labor situation will probably necessitate further reductions in schedules which will be made, as far as possible, in obsolescent types and with minimum interference in the high priority models. The immediate problem in Canada and in Australia is

TABLE 3.—THE COMBINED AIRPLANE PROGRAM a/
(Unit - Each)

PERIOD AND COUNTRY	Total	All Military Airplanes										
		All Combat Planes							Heavy and Medium Transports	Light Transports and Communications	Trainers
		Total	Heavy Bombers		Medium Bombers	Light Bombers, Ex.Naval	Fighters Ex.Naval	Naval Types			
			Long Range	Standard							
Combined total - 1943	113,949	73,988	92	14,219	10,610	6,749	28,958	13,360	3,666	8,476	25,819
United States	83,007	53,992	92	9,393	7,676	5,310	17,912	13,609	3,443	7,738	17,834
United Kingdom	26,263	20,746	0	4,810	2,737	732	10,727	1,720	223	469	4,825
Canada	4,104	745	0	16	197	336	165	31	0	209	3,150
Australia	575	505	0	0	0	351	154	0	0	0	10
Combined total - 1944	132,673	103,820	1,392	23,058	9,962	5,020	37,801	26,584	8,057	7,768	13,030
United States	96,696	77,189	1,392	16,563	6,906	3,914	25,761	24,333	7,047	6,581	7,879
United Kingdom	28,773	23,991	0	6,292	2,523	431	11,600	1,145	1,010	638	3,154
Canada	4,318	2,092	0	203	516	547	20	806	0	549	1,877
Australia	688	548	0	0	0	128	420	0	0	0	140
Combined total - 1945	125,398	105,152	5,217	15,651	5,543	5,237	42,507	28,997	9,084	5,790	7,372
United States	92,783	74,618	5,217	7,645	3,813	4,849	28,947	24,147	8,492	4,995	4,678
United Kingdom	28,020	25,379	0	7,610	1,703	347	12,429	3,290	592	313	1,734
Canada	4,595	3,155	0	396	27	41	1,131	1,560	0	480	960

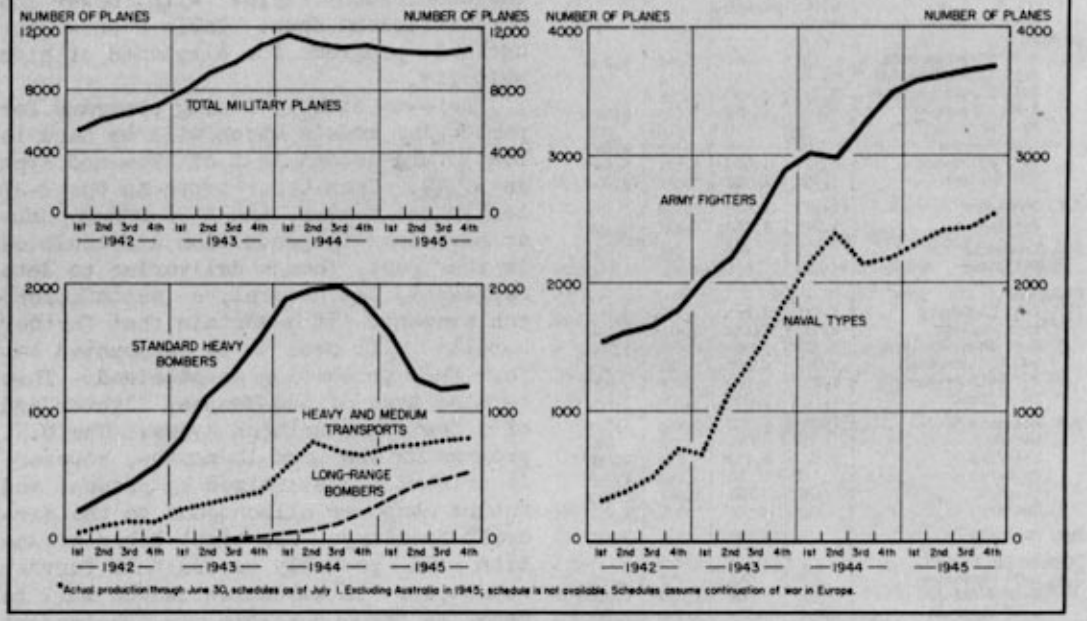
Note: Schedules assume continuation of war in Europe.
a/ Actual production through June 30, schedules as of July 1. Combined total for 1945 excludes Australia, for which schedules are not available.

CHART 3

TRENDS IN COMBINED AIRPLANE PRODUCTION*

NUMBER OF PLANES IN SELECTED GROUPS

AVERAGE MONTHLY PRODUCTION, BY QUARTERS, 1942 - 1945



*Actual production through June 30, schedules as of July 1. Excluding Australia in 1945; schedule is not available. Schedules assume continuation of war in Europe.

to establish in full production a limited number of combat types which are new to their programs. These types are the Lancaster, Mosquito, and Helldiver in Canada—good progress having been made already with all of these—and the Mosquito and Mustang fighters in Australia. The airplane programs for the U.S., the U.K., Canada, and Australia as of July 1 are shown in Table 3.

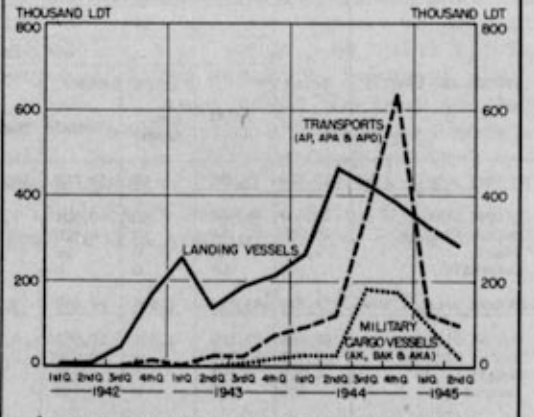
SHIPS

The outstanding feature of the first half of 1944 was the sharp rise in deliveries of landing vessels. The bulk of the landing vessel program is in the U.S. where 728,000 light displacement tons were completed in the first half as against 400,000 in the previous six months. Substantial increases were also

CHART 4

U.S. LANDING VESSELS, TRANSPORTS, AND MILITARY CARGO VESSELS*

LIGHT DISPLACEMENT TONNAGE, JANUARY 1942 - JUNE 1945



*Actual deliveries through June 30, July 1 schedules thereafter. Schedules assume continuation of war in Europe.

achieved in the U.K. and Canada. This performance practically met the D-day schedule established in the fall of 1943.

Deliveries of other naval and merchant ships declined 14 percent in value between the second half of 1943 and the first half of 1944. Much of this decline was due to the greater emphasis on landing vessels. In the U.S. there was also a shift from the quickly-constructed ocean convoy to the standard major combat vessels and from Liberty ships to transports and faster cargo types, with their longer building periods.

Combined deliveries of ships are scheduled in the last half of this year at a level 13 percent above the first half and 7 percent above the last six months of 1943. This will probably mark the wartime peak in shipbuilding, since it is clear that there will be some decline in 1945, though programs are not yet firm.

The emphasis from now on will be on the larger combat ships and on attack transport and military cargo vessels designed for the Pacific war. The latter types are a U.S. program, and delivery is largely concentrated in the second half of 1944. Combined deliveries of all major combat vessels in 1945 will be above 1944 and approximately at the level to be reached in the latter part of this year. Several new types of combat vessels are due for delivery in the next 18 months. Data on the major combat vessel program are shown in Table 4.

Table 4.—COMBINED DELIVERIES OF MAJOR COMBAT VESSELS, 1944-1945

ITEM	1944			1945
	First Half Actual	Second Half July 1 Schedule	Total	July 1 Schedule
Total Deliveries (Thousand SDT)	443	536	979	1,178
Selected Types (Each)				
U.S. Carriers 45,000-ton a/	0	0	0	2
27,000-ton	3	4	7	7
Cruisers 27,000-ton a/	1	1	2	0
13,400-ton	0	2	2	12
10,000-ton	5	6	11	10
Destroyers 2,100-2,200-ton	49	48	97	126
Submarines 1,526-ton	38	42	80	84
U.K. Carriers 23,000-ton	1	1	2	0
14,000-ton a/	0	1	1	6
Cruisers 8,000-ton	1	0	1	2
Destroyers 2,300-ton a/	0	3	3	20
1,700-1,800-ton	15	15	30	25
Submarines 1,120-ton a/	0	0	0	12
Can. Destroyers 1,850-ton a/	0	0	0	2

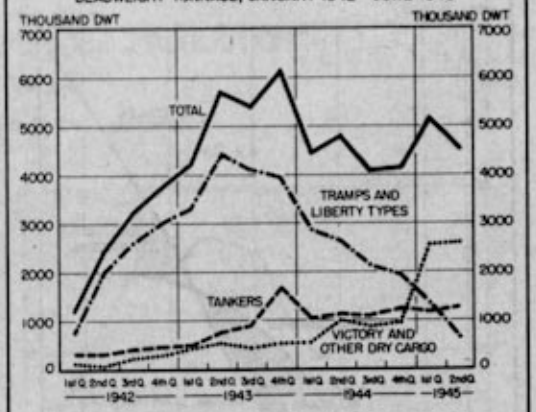
a/ New types.

CHART 5

COMBINED MERCHANT VESSEL DELIVERIES*

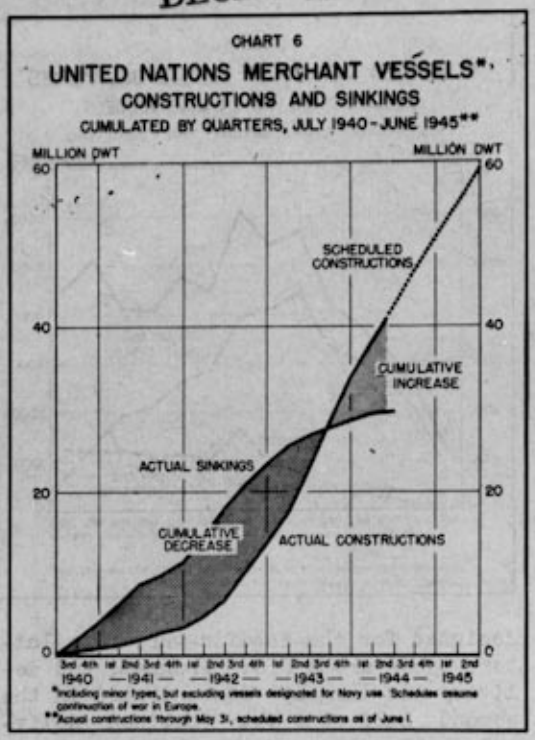
EXCLUDING MILITARY CARGO VESSELS

DEADWEIGHT TONNAGE, JANUARY 1942 – JUNE 1945



* Major types of merchant vessels; actual deliveries through June 30, schedules as of July 1. Schedules assume continuation of war in Europe.

Total tonnage of merchant vessels delivered has declined from the 1943 peak in all countries (See Chart 5). In the U.S., the program for Liberty ships is now nearly finished. The first Victory type was completed in February and the program is to reach a peak early in 1945. There will be a marked acceleration of deliveries of standard cargo vessels in the first six months of 1945, when more are scheduled than in the whole of 1944. The larger deliveries of the faster standard and Victory type vessels, however, does not compensate in terms of tonnage for the tapering off in the Liberty program. Deliveries



of faster cargo vessels (cargo liners) will also be higher in the U.K. in the second half of this year and in 1945. Tramp tonnage, however, still dominates the U.K. merchant shipbuilding program; deliveries were greatly reduced in 1944 to make way for other vessels, but there is a larger program for 1945. Canada is now building improved tramp types and maintenance vessels for use as naval auxiliaries, but the over-all program is much lower than in 1943 and is scheduled to drop further in the middle of 1945.

ORDNANCE AND VEHICLES

The decline in total dollar output of ordnance and vehicles which began late in 1943 and was scheduled at the beginning of the year to continue throughout 1944 has now come to an end. On the basis of June 1 schedules, combined ordnance production will rise approximately 11 percent from the May rate by the last quarter of the year. This level, if achieved, will be only 3 percent below the peak ordnance production of the fourth quarter of 1943. A sharp rise in the output of artillery and tank gun ammunition and lesser increases in Naval guns and ammunition will more than offset level or declining schedules in other areas. (See Chart 7).

Combined production of combat and motor vehicles will also rise during the next half year. These over-all increases should effectively remove any tendency to regard the task ahead for combined ordnance and vehicle production as an easy one. (See Table 5).

TABLE 5.—THE COMBINED ORDNANCE AND VEHICLE PROGRAM, 1944 a/

(Unit - Million Dollars)

GROUP	First Half	Second Half	Percent Change
All ordnance and military vehicles	91,070	98,685	+8%
Guns and small arms	18,381	16,154	-12
Ammunition and bombs	40,355	45,933	+14
Combat vehicles	13,563	14,883	+10
Motor vehicles and tractors	18,771	21,713	+16

a/ As of June 1, 1944; actual production through May 31, June 1 schedules thereafter.

The outstanding feature of the present combined ordnance program is the emphasis on heavier guns and ammunition. The step-ups in production resulting from the need for heavier artillery evidenced in the Italian campaign have now been incorporated in the schedules. Table 6 shows the increases in the 1944 programs for selected calibers of guns from the first of the year. In the U.S. the large increase, necessitating considerable expansion of plant facilities, is concentrated in production of spare cannon; in the U.K. the increase is mainly in complete guns.

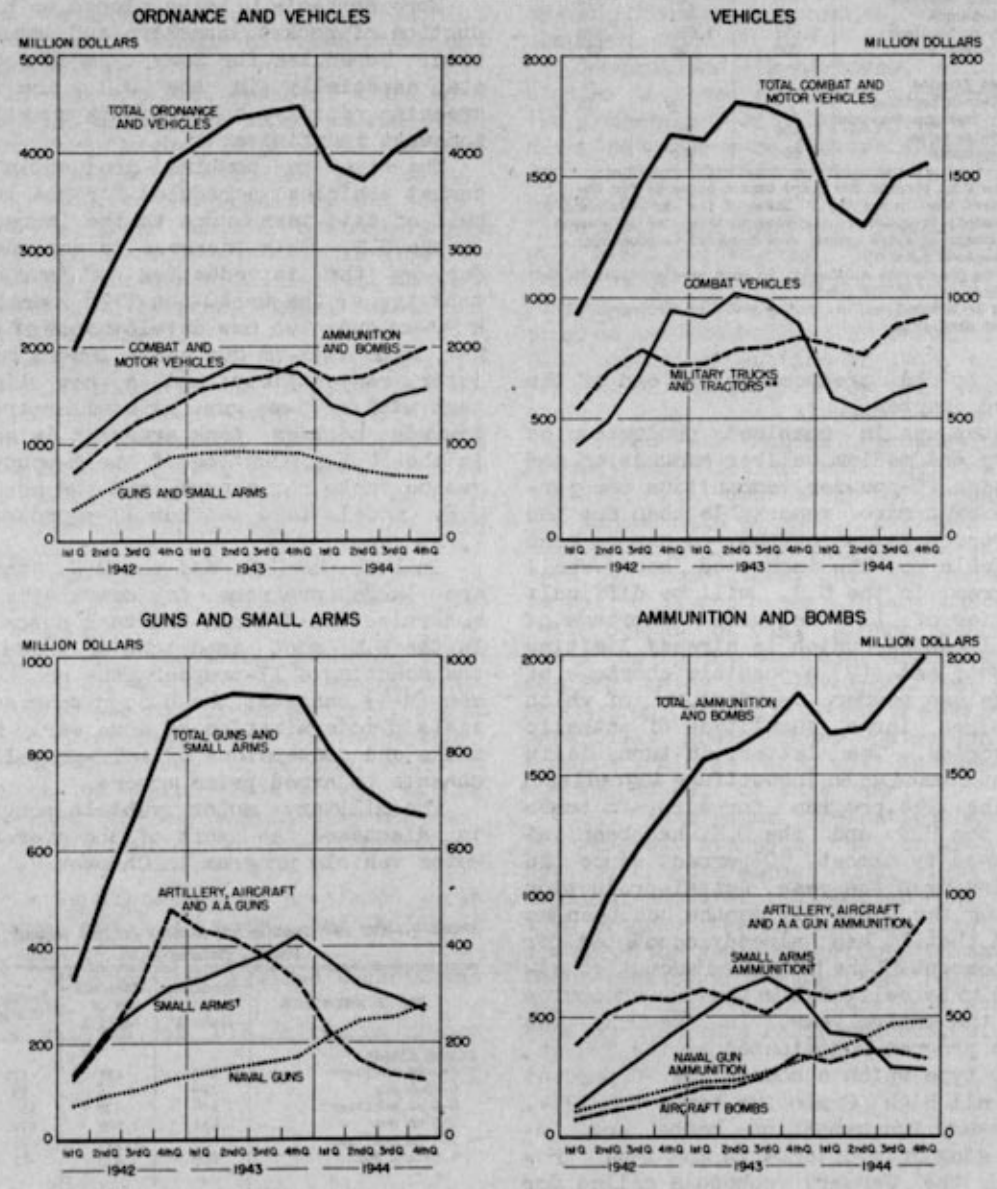
The same trend to heavier types has extended to U.S. tank and antitank guns as well. The program for 90-mm guns has increased from 546 to 1,750 units since the beginning of the year, with the adaptation of this gun for use on tanks and self-propelled chassis. Schedules for 3-inch antitank guns have doubled since the first of the year, and 1,000 complete units are called for,

CHART 7

COMBINED ORDNANCE AND VEHICLE PRODUCTION*

1942-1944, BY VALUE

AT U.S. 1943 STANDARD COSTS



* Actual production through May 31, 1944; June I schedule thereafter. Schedules assume continuation of war in Europe.
** Excluding non-military procurement.
† Including 20mm.

TABLE 6.—THE 1944 PROGRAM FOR HEAVIER CALIBER GUNS
(Unit - Each)

CALIBER OF GUN	Complete Guns		Spare Cannon a/
	Schedule as of Jan. 1	Schedule as of July 1	Schedule as of July 1
United States			
240-mm howitzer	250	153	101
8-inch gun	69	49	111
8-inch howitzer	499	546	376
155-mm gun	703	921	1,244
155-mm howitzer	2,651	1,889	1,378
4.5-inch gun	200	40	477
United Kingdom			
7.2-inch howitzer	0	b/	75 a/
5.5-inch gun-howitzer	400	720	*
4.5-inch gun			*
25-pounder	200	460	*

a/ The U.S. program for spare cannon appeared for the first time in the May 1 issue of the War Department's Monthly Progress Report. Prior to this time only small numbers of spare cannon were produced to accompany complete guns.
b/ Schedule is not available; 56 guns were produced in the first half of the year.
c/ To be mounted on U.S. 8-inch howitzer carriages.
* Not available.

all to be produced by the end of the third quarter.

Step-ups in combined production of heavy and medium caliber ammunition and British 25-pounder ammunition are perhaps even more remarkable than are the increases in gun output, as may be seen in Table 7. The increased heavy shell program in the U.S. will be difficult in view of: (1) the current shortage of shell bodies, which is already limiting output; and (2) a possible shortage of smokeless powder, manufacture of which requires large quantities of phthalic anhydride. The latter, in turn, is in great demand as an insectifuge ingredient.

The 1944 program for aircraft bombs in the U.S. and the U.K. has been increased by almost 50 percent since the beginning of the year. Actual production during the first six months has been so good that it has already accounted for 46 percent of the increased amount scheduled to be delivered in the two countries in the entire year. In the U.S., the bomb program is dominated by the 500-lb. H.E. type which accounts for 72 percent of all High Explosive bombs in 1944. However, Fragmentation bombs are increasing in importance in the 1944 program; the January schedule called for 3.9 million of the 20-lb. type in the year and this has been increased to 13.3 million as of July 1. Bomb production in the U.K. is scheduled to be nearly 40 percent higher by value in the second half than in the first half of 1944. The switch to Medium and High Capacity types is now complete, and a new 8-lb. Fragmentation bomb has been added to the program with production beginning in July.

More emphasis is being placed on production of rocket launchers and ammunition. Schedules for many types of rockets, especially in the U.S., are increasing rapidly, but programs are still somewhat indefinite.

The rise in combined production of combat vehicles scheduled for the last half of this year is due to the increase in the U.S. This increase is accounted for by the introduction of four new tank types: the new 40-ton T-26 mounting a 90-mm gun; two new developments of the M-4, with a 76-mm gun and a 105-mm howitzer, respectively; and a new light tank with a 75-mm gun. A similar trend towards heavier tank armament is seen in the U.K.; mounting of the 6-pounder gun on tanks has ceased, and the newest U.K. models take either 17-pounder or 77-mm guns.

In both the U.S. and the U.K., there are large programs for conversion or modernization of tanks and tank chassis. In the U.K. most important of these is the mounting of 17-pounder guns on Sherman (M-4) chassis; the U.S. program consists of modernization of some early M-4 tanks and conversions of self-propelled chassis to armed prime movers.

The military motor vehicle program is discussed as part of the over-all motor vehicle program in Chapter V.

TABLE 7.—THE 1944 PROGRAM FOR HEAVIER CALIBER AMMUNITION
(Unit - Thousand)

CALIBER OF AMMUNITION	Schedule as of Jan. 1	Schedule as of July 1	Percent Change
United States			
240-mm howitzer	162	135	-17%
8-inch gun	129	58	-55
8-inch howitzer	604	908	+50
155-mm gun	1,411	2,529	+79
155-mm howitzer	2,289	4,543	+98
4.5-inch gun	605	475	-22
United Kingdom and Canada			
5.5-inch gun-howitzer	1,825	2,101	+15
4.5-inch gun	0	1,046	-
25-pounder	3,700	13,396	+262

RADIO AND RADAR

Airborne radar, and to a lesser extent airborne radio, continue to present the chief problems of combined production in the communications field. Production of ground equipment is definitely past its peak, but unfortunately most of the small manufacturers engaged in this program are unable to switch to production of the very complex airborne radar and radio sets.

In both the U.S. and U.K. there have been shifts from the more general types of airborne radar equipment to the more specialized sets, such as gun-laying, navigation, counter-measure, and target control. These shifts are mainly the result of changes in tactical requirements for our own offensive and changes necessitated by enemy improvements and counter-measures.

The 1944 airborne radar program in the U.S. calls for an increase in output of 170 percent over that of 1943, in value. Production during the first six months of 1944 amounted to 300 million dollars. This rate must be more than doubled if current schedules (already cut below 1944 tactical requirements) are to be met. The program will be difficult to achieve for the following reasons:

1. Nearly three-fourths of the items in the program are "new" items, that is, they were not in production in 1943.
2. Plant facilities are inadequate, due to hesitancy of manufacturers to convert to this field in view of the fact that the equipment being manufactured is primarily of a military character.
3. Supply of certain precision parts (gauges, etc.) is short, and holds up delivery of complete sets.
4. Shortage of skilled technicians is acute.

Production of U.K. airborne radar equipment during the first six months came close to meeting the increased programs called for at the beginning of the year. Further increases are scheduled for the balance of 1944, with special emphasis on Bombing Equipment H2S and Interception Equipment A.I. (Mks. VIII and VIII-A). The achievement of the program for these two items will require improved rates of delivery on certain limiting components, especially Scanners.

The problems in airborne radio are similar to those of airborne radar, and the achievement of this program will be affected by the same factors influencing the production of airborne radar discussed above.

Ground equipment has become fairly well standardized, and peak production for most of the items has already been passed. In the U.S., the ground radar program for 1944 is about 20 percent less than actual production in 1943, and 75 percent of the program for this year as stated July 1 has already been met in the first six months. Production of ground and vehicular radio equipment in the U.S. will decline by 85 percent in the second half of 1944. Equipment for landing craft has greatly increased the need for some items, but the industry is well equipped to meet this situation. Total output of U.K. ground radar and radio equipment is also scheduled to decline below the level of first half production, although output of some sets, especially ground radar detection and combat vehicle radio will increase in the second half of this year.

U.S. ship radar production has not yet reached its peak, the program for 1944 calling for almost double 1943 production. However, 43 percent of the 1944 program was met in the first six months of the year, and production should meet schedules during the next six months. Complete data are not available on U.K. ship radar production.

CHAPTER III

THE COMBINED MANPOWER SITUATION

The manpower situation is now seen to be tighter than was anticipated at the beginning of the year. Manpower controls have been progressively tightened in both the U.S. and Canada in recent months. There is no prospect, before the defeat of Germany, of any relaxation in the national systems of manpower control in any of the three countries.

As is indicated in Chart 8 and Table 8, the civilian labor force including employment in the munitions industries is declining in 1944 in both the U.S. and the U.K. and increasing slightly in Canada. The needs of the armed forces in the U.S. exceed the smaller growth in the total labor force which is now anticipated. In the U.K., the total manpower available for the armed forces and civilian employment together is no longer growing. The decline in the birth rate in the late 1920's, together with some current withdrawal of women from employment, is expected to reduce the total labor force and hence civilian employment, during 1944. In Canada, both the total labor force and civilian employment are growing slowly.

In all three countries employment in munitions industries has been decreasing. In the U.S., in spite of declining employment, munitions output has remained nearly at the rate reached late in 1943 as a result of greater output per head. In the U.K. and Canada also the effect of the decrease on the volume of production is partly offset by increasing productivity.

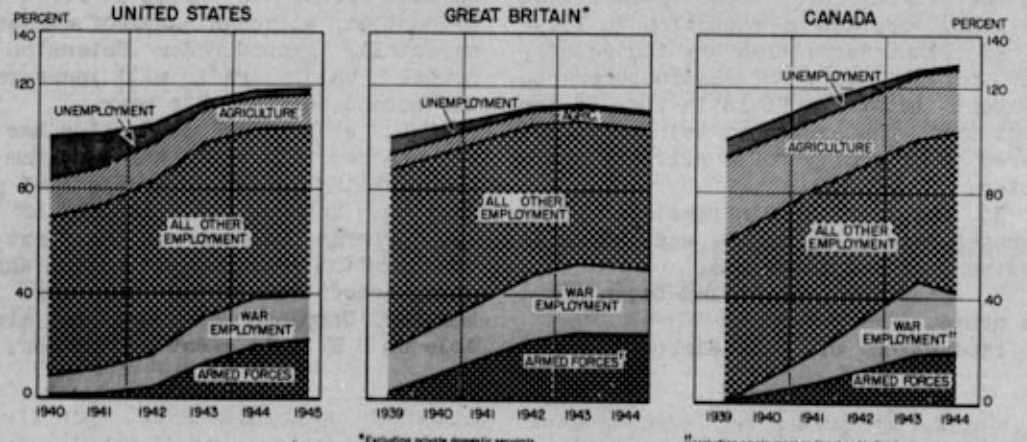
Except in Canada, where the decline in munitions employment is more than balanced by increases in non-war employment, changes in civilian employ-

CHART 8

THE MANPOWER POSITION

DISTRIBUTION OF THE LABOR FORCE

TOTAL LABOR FORCE AT BASE DATE = 100



*Excluding private domestic servants.
†Including full-time civil defense.

††Including employment on direct and indirect war production and construction, and the war content of employment in ancillary industries.

TABLE 8.—DISTRIBUTION OF THE LABOR FORCE IN THE UNITED STATES, GREAT BRITAIN, AND CANADA

United States

(Million persons 14 years and over)

GROUP	January 1940	January 1941	January 1942	January 1943	January 1944	January 1945
Total labor force	52.7	53.3	55.1	59.7	61.9	62.2
Armed forces	0.4	0.9	2.1	7.0	10.5	11.8
Agriculture	7.7	7.6	7.4	7.1	6.6	6.6
Civilian non-agricultural, labor force	44.6	44.8	45.6	45.6	44.8	43.8
Metals & chemicals (munitions) industries	4.0	4.9	6.5	9.4	10.1	8.9
Textiles, clothing & leather	2.6	2.7	2.9	2.9	2.6	2.5
Fuels, including manufactured fuels	0.9	0.9	0.9	0.6	0.8	0.8
Federal war agencies	0.1	0.2	0.4	1.4	1.5	1.6
Transportation & public utilities	2.8	3.0	3.3	3.5	3.7	3.7
Construction	1.5	1.9	1.8	1.7	0.8	0.6
All other employment	24.1	24.4	25.9	24.7	24.2	24.6
Unemployed	8.6	6.8	3.9	1.4	1.1	1.1

Great Britain

(Percent of total labor force in mid-1939; men 14-64, women 14-59)

GROUP	Mid-1939	Mid-1942	Mid-1943	End of 1944
Total labor force a/	100.0%	111.5%	112.5%	109.8%
Armed forces and full-time civil defense	2.8	22.6	23.6	25.7
Agriculture	5.6	5.5	5.6	5.6
Civilian non-agricultural labor force	91.6	83.4	83.3	78.5
Metals and chemicals (munitions) industries	15.7	25.2	26.4	24.3
Government (national and local)	7.0	8.7	9.0	9.1
Transportation, fuel and utilities b/	11.9	11.2	10.9	11.2
Textiles, clothing and leather	9.3	6.8	6.1	6.1
Construction and building	6.6	4.5	3.7	3.1
All other employment	34.3	26.2	24.6	24.2
Unemployed	6.8	0.8	0.6	0.5

Canada

(Thousand persons 14 years and over)

GROUP	August 31, 1939	June 2, 1941	September 30, 1943	September 30, 1944
Total labor force	4,013	4,588	5,075	5,160
Armed forces	10	306	750	783
Agriculture c/	1,266	1,056	990	985
Munitions industries d/	f/	460	1,120	925
All other employment	2,464	2,505	2,170	2,422
Unemployed	273	261	45	45

a/ Excluding private domestic servants.
b/ Including metal mining and quarrying.
c/ Males only.
d/ Including employment on direct and indirect war production and construction, and the war content of employment in ancillary industries.
f/ Assumed to be zero.

ment outside the munitions industries are small. Employment in government, transportation, fuel, utilities, and farming is being maintained or increased. In the U.K., other employment is being squeezed a little more despite the low level to which it has already fallen. In the U.S., construction employment is continuing to decline while employment in all other industries together is increasing slightly.

THE UNITED STATES

In the first half of 1944 the U.S. manpower problem was chiefly the recruitment of additional labor for particular industries and areas while the total volume of civilian manpower was slightly declining.

Total civilian employment in the U.S. reached its highest level in the summer of 1943. Since October 1943, as

Table 9 reveals, the total number of civilians employed has averaged about 800,000 less than in the corresponding months a year earlier. Employment in the metals and chemicals (or munitions) industries reached a peak of 10.4 million in November 1943, from which it has declined to about 9.6 million by June 1944.

Table 9 .--NET CHANGES IN USE OF LABOR FORCE FROM CORRESPONDING MONTH OF PRECEDING YEAR
(Unit - Million Persons)

MONTH	Civilian Employment			Armed Forces
	Total	Male	Female	
1942 - July	+3.03	+1.14	+1.89	+2.11
October	+2.56	+ .31	+2.25	+3.19
November	+2.23	+ .10	+2.33	+3.73
December	+1.86	- .72	+2.58	+4.38
1943 - April	+ .48	-2.35	+2.83	+5.43
September	+ .03	-2.82	+2.85	+5.17
October	-1.00	-3.11	+2.11	+4.80
November	- .92	-2.73	+1.81	+4.37
1944 - March	- .74	-1.40	+ .66	+2.84
June	- .78	-1.18	+ .40	+2.48

As early as November 1942, Selective Service withdrawals from industry began to outnumber the additional men who could be brought into the labor market. The number of women entering industry each month, however, more than balanced the decline in the civilian male labor force until October 1943, when total civilian employment, after making allowance for seasonal variations, began to decline.

While decreases in employment in various munitions plants tended to ease the labor situation, the total industrial male labor supply was being diminished by the requirements of the armed forces. These forces increased by 1.1 million during the first six months of 1944 and attained practically their full authorized net strength. Moreover, during this period, occupational deferments for skilled, necessary and even irreplaceable men under 26 were being withdrawn wholesale from industry when these men could meet the tests of the armed forces. Shortages of male labor had become nation-wide.

The decline in the total employment required for munitions production permitted the manpower needs of the armed services to be met without deterioration of the over-all labor position, but it did not substantially ease the problems of local manpower supply. The pool of labor becoming available from munitions industries was not easily redirected to the required spots and was less easily manageable than the earlier flow of the unemployed to war jobs or of new entrants into the labor market in response to wartime conditions.

A few areas have become more critical during the past six months; a few less so, but the number of critical labor shortage areas has remained at the same high level as at the end of 1943. A somewhat modified list of industries has appeared as urgently in need of labor and incapable of recruiting or holding the volume of labor required to meet schedules.

During the first six months of 1944, U.S. war production included a number of rising programs and a much larger number of stable or declining programs. In munitions industries as a whole there was a continuing increase in output in relation to man-hours employed in its production. Total monthly munitions production hovered within 3 percent of the November 1943 peak level during the first six months of 1944, while employment in munitions industries declined about 8 percent.

One of the most important tasks in manpower planning and management was to enable workers to shift to places where they were needed from production which was being cut back or production which required fewer workers than formerly, because of increased efficiency. It was apparently not always possible to make cut-backs in areas of labor stringency, where additional labor was still needed; even where this was done and alternative job opportunities in essential activities were available, displaced workers have not uniformly gone to these jobs. Consequently, there was increasing evidence during the first half of 1944 that all substantial cut-backs, involving both

prime and subcontractors, were accompanied by some contraction of the labor force and some diversion of labor to less essential activity. Despite the decrease of some 800,000 workers in munitions employment since November 1943 and despite the fact that unemployment in recent months has averaged about 200,000 less than in the corresponding months of 1943 and has reached a record low of 750,000, many war producers have remained short of labor. Thus, a primary concern of manpower policy came to be the avoidance of harmful consequences growing out of shifts in production.

Greater efforts were made during this period to channel workers to the most important and necessary war production through controlled referral of job seekers and by the imposition of plant employment ceilings to promote better labor utilization and assist in priority referral of workers. In June it was decided to adopt "priorities referral plans" for males on a nation-wide basis to the extent necessitated by area conditions. The purpose of this step was to aid in meeting the male labor needs of critical industries either locally or through voluntary transfers from areas of excess labor supply. To implement these plans there was an extension of the system of Area Production Urgency Committees and Area Manpower Priorities Committees, including the wholesale creation of limited Modified Area Production Urgency and Manpower Priorities Committees in areas of less over-all manpower stringency.

Area Production Urgency Committees and Manpower Priorities Committees developed in detail additional specific measures needed to stretch the available declining civilian manpower over the essential programs. Administration improved and better results were obtained as employment ceilings were more widely used and accepted and as better techniques of channeling workers to priority jobs were developed. More realistic labor requirement figures were obtained by having the procurement agencies screen and validate additional demands in the light of their production schedules and their knowledge of labor utilization experience in other facilities. The committees carefully analyzed the "must" programs to make sure that they would not be impeded for lack of manpower. In addition, in tight areas, facilities released by cut-backs were pressed into subcontracting for important programs, since it was found that even in the same area establishments were able to retain a relatively immobile core of employees. Thus, where possible, the job was brought to the worker rather than the worker to the job.

In a number of cases manpower stringencies were solved by greater efficiency and better utilization of labor, by the substitution of materials requiring less manpower, by closer adjustment of inventories, by curtailment of less essential production, by greater imports, or by a combination of these measures.

Difficult as some of the manpower problems have been during the first half of the year, it cannot be said that labor shortages have caused the output of many important end-items to fail to meet the schedules set. Some key industries, however, were always in a critical position for lack of manpower and all possible efforts were being urged to provide them with additional labor, including wage increases above those permitted by the national stabilization policy, the use of foreign nationals and prisoners of war, and intensive recruiting of men rejected for military service. The industries and activities with the most persistent manpower shortages threatening schedules or requirements at the end of the period were foundries and forge shops, heavy-duty tire plants, heavy truck plants, lumber, pulpwood, and textile mills, coal mines, and navy shore establishments. In addition, many individual plants in rising or in basic items of war production continued to be hampered by insufficient manpower due to a heavy concentration of work in the area, large separation rates, a general insufficiency of common male labor, specific shortages of certain types of skilled workers, and often, low or unequal entrance wage rates. In some industries, like electronics and ship repair, new production records are

being made while manpower problems remain tough and continuous. In others, like coal, steel, heavy-duty tires, and textiles, the net result will be that the civilian consumer will have to be deprived of needed products which would otherwise have been available to him.

Aggravated by the normal summer diversion of labor supply, the most serious manpower problem at present is the continued shortage in foundries. There is a current estimated shortage of about 20,000 workers—mostly unskilled males—10,000 of whom are needed in critical foundries engaged fully on "must" programs. Insufficient castings and forgings in the foundries and forge shops are the most important shortages which threaten scheduled deliveries of a number of vitally needed items during the third quarter. These include engines, artillery, tractors, heavy-duty trucks, ships, railway car wheels and brake shoes, and some types of farm machinery. Quick production changes dictated by battle experience will continue to throw additional burdens on the foundries and other critical plants. A rounded program to recruit additional workers during the summer months and to step up the productivity of the most critical foundries has been initiated.

In view of the fact that munitions production is scheduled to rise during the remaining months of 1944 and particularly in view of recent increases in the artillery, artillery ammunition, bomb and tank programs, it seems unlikely that, while war continues in both the European and Asiatic theaters, the requirements for the manning of essential production will permit the relaxing of present manpower controls or the undertaking of any substantial reconversion of industry, despite the release of various production facilities and the availability of various materials beyond the needs of the armed forces.

THE UNITED KINGDOM

The problems which face the U.K. in 1944 arise from the imposition of additional programs and requirements upon the peak mobilization of manpower for war purposes. The Ministry of Labor has now registered all men up to 52 years of age and all women up to 51. There has been a periodic review of the position of those who registered in earlier age groups so that those whose circumstances may have changed in the meantime can now be directed to undertake full- or part-time work. The process of direction has been extended as far as is practicable.

When plans were made for 1944 it was hoped to extract a still further yield from the less essential industries—clothing, distribution and building in particular, as well as a wide range of other industries. But these industries, which now employ about 6,200,000 compared with 9,300,000 before the war, have been so far contracted already that it has not been found possible to obtain the yield which was expected. A further problem of British peak mobilization is that, in the future, the U.K. must face a decline in the total availability of labor—even before service intake has been withdrawn. Some of the women directed into industry have not been able to stand up to the unaccustomed work while those who have had their first child are now no longer liable to direction, and the annual intake of labor is beginning to be reduced by the decline in the birth rates of the later 1920's.

Against this tightening supply position, new demands have arisen as Britain moved from being a base to being a bridgehead. A complex of problems arises. Labor is required for the supply of services for U.S. troops (such as laundries), for staffing U.S. depots, for transport as a whole (railways, road transport, and docks), for coal mining in preparation for the European needs which will arise in the later stages of the invasion as well as for special material in connection with the invasion—material ranging from the waterproofing of vehicles to special pierheads. The speed with which such material was required, and frequently its bulky nature, make it necessary for U.K. to manufacture against the needs of both the U.K. and the U.S. elements in the invasion forces.

In this situation some of the manpower allocations made at the beginning of the

year have had to be modified. It should be stressed that the cuts required to be made by the supply departments are implemented by a two-fold process. At the first stage, departments make reductions in their programs which are calculated to conform to the new manpower allocation; at the second stage, the development of a system designating products, which entitles the firms producing them to first priority in the supply of labor, has insured that such labor as has become available during the period goes to the most urgent uses.

During the first half of the year insufficient labor was available for the first preference machinery to meet the special and urgent demands arising. So, for transport and the more urgent of the operational needs, recourse has been had to special measures for the withdrawal of labor already employed on other work (including war work) in order to build up a labor force sufficiently rapidly at the required places. This procedure is being continued for operational needs. Though, fortunately, it has not proved necessary to continue it for transport and dock workers, the measure of success of the adjustment in labor supply has been the absence of trouble in transport and the fact that the vast majority of the invasion equipment was delivered in time.

The stringency of the situation is illustrated by additions to the designated list made during the first half of the year. Among the important newly-designated items are the following:

- Towing cables for gliders
- Jettison (drop) tanks for U.K. and U.S. aircraft
- Steel kegs and drums
- Penicillin and DDT
- Depots for Admiralty, Royal Army Ordnance Corps, and U.S. Army (Quartermaster)
- Operational fuelling depots (Air Ministry and Petroleum Board)
- Port transport and transport work in selected areas
- Overhaul, repair, and maintenance of Central Electricity Board generating plants

Some of these items indicate the growing depletion of general service and maintenance organizations in the U.K. during five years of war.

The final factor which complicates the present situation is the flying bomb attack which, on the one hand, means that the anticipated reduction in the civil defense force has to be postponed, and on the other hand, has greatly increased the requirement for building labor for temporary repairs.

During the first half of the year the manpower engaged in the munitions industries fell by between 3 and 4 percent but the volume of output in these industries has been substantially maintained at a steady figure throughout this period as the result of continuing increase of output per head. If this increase continues it will lessen the effect of the further cuts in manpower.

Decisions have been recently made on the allocation of labor for the second half of 1944. These allocations permit no improvement in civilian standards nor in the expansion of exports during the period. Pressure to obtain labor from civilian production will, in fact, continue to be as great as in the past.

But elbowroom has to be made for continuing service demands to meet casualties on the various fronts in which the U.K. forces are engaged. The factors which have been described above limit the available supply of labor, and in consequence, further substantial cuts must be made in the manpower available to the munition industries. Over the whole year employment in munitions will have to drop by just under 10 percent from the employment at the beginning of the year. Certain adjustments must also be made between the supply departments. The proposed reductions in the Ministry of Supply labor force (mostly for ground army stores) were rather larger than could be borne in view of the fact that programs must be planned on the assumption that the German war has not stopped by the end of the current year. Certain specific additional demands such as field and medium artillery ammunition, with substantial consequent labor commitments, have been placed on the Ministry of Supply. The labor force engaged in the production of

aircraft in the first half of the year dropped somewhat more than was anticipated and aircraft output has recently been below program. A further reduction in its labor force will have to be borne by the aircraft industry with the risk of a consequent further decline in aircraft production. In the same way, the Admiralty labor force, which was being maintained at substantially its present level, in view of the Japanese war commitment, has had to be reduced slightly.

CANADA

In the early spring of 1944, there was a sharp reversal of the downward trend of civilian manpower requirements in Canada. Previously, it had been expected that the substantial cut-backs in the Canadian war production program would gradually alleviate the serious labor shortage which reached its peak in September 1943. In April 1944, however, primarily as a result of the sudden acceleration of the ammunition program, the need for additional workers again became acute. About two-thirds of the Canadian capacity for heavy ammunition had been shut down, so that the decision to step up production to full capacity, with a corresponding increase in the activities of explosives and shell-filling plants intensified the shortage of manpower. It was estimated that about 10,000 additional workers would be needed as a result of the revised ammunition program. In addition, this demand coincided with the seasonal upturn of labor requirements, particularly in agriculture, fishing, and lumbering. As a result, prior forecasts of an easing of the manpower shortage have had to be revised.

Despite the fact that Canada has been at war for nearly five years, there continues to be a steady flow of men and women into the armed services. The total number in the armed services was 769,000 by the end of 1943, but the need for replacements continues. The manpower quota for total induction into the armed forces for the twelve months beginning April 1944 is 98,000, of which 60,000 are for the Army, 26,000 for the RCAF, and 12,000 for the Navy. Actual enlistments in the Army had been at the rate of 5,000 per month from September 1943 to February 1944. During the winter the cancellation of occupational deferments resulting from cut-backs in munitions programs maintained this level of recruitment, but there were indications in the spring of 1944 that it would be increasingly difficult to fill the needs of the armed services.

In mid-June 1944 it was estimated that 5,115,000 (excluding females in agriculture) or 58 percent, out of a total of 8,820,000 persons fourteen years and over were either in the armed services or gainfully occupied. At the beginning of June it was estimated, without taking account of agriculture, that 140,000 workers were needed to fill vacancies in war plants and essential industries which are assigned the two highest labor priorities, i.e., those industries classed as "A" and "B". In "C" and "D" priority industries, there were additional requirements for about 55,000 workers.

Direct and indirect employment in war industry at the end of 1943 totalled approximately 1,104,000, of which 235,000 were women. Of these, a total of 836,000 (including 225,000 women) were engaged in the manufacture of munitions; the balance being employed in war construction, transportation, power, logging, etc.

There has been a marked increase in the employment of women, particularly in munitions industries. A total of 638,000 women were employed in August 1939. By September 1, 1943 this number had increased to 1,075,000, excluding 760,000 engaged in agriculture.

Apart from the munitions industries, in which manpower requirements have fluctuated in response to changing military programs, there have been specific shortages in several essential industries. The loss of manpower in logging and lumbering threatened to reduce seriously the output of that industry. However, efforts by the manpower authorities to preserve the existing labor supply, as well as to utilize prisoners of war, internees, and conscientious

objectors have been so successful that it is estimated that 1944 lumber production will equal that of 1943. It has also been possible to increase the projected level of production of pulpwood through the offer of concessions to woods labor.

Coal mining has been seriously affected by manpower shortages. In view of the coal emergency, special treatment has been accorded coal miners. By March 1944 several thousand miners had been granted leave from the army to work in the mines, and coal miners were both exempt from compulsory military service and prohibited from enlisting. Also, provision had been made for the compulsory transfer of men with coal mining experience from other industries.

Labor shortages in the base metal mining industry have been extremely serious, mainly because of the drain of suitable labor into the armed services. National Selective Service has conducted extensive campaigns to secure the transfer of men from other industries, including agriculture, to the base metal mines, particularly to the nickel mines. There were also specific and acute shortages in the spring of 1944 of longshoremen and of workers in packing houses, railways, foundries, agricultural implement factories, and the primary textile industry.

The gradual development of a pervasive manpower shortage has been accompanied by increasingly restrictive manpower controls. By mid-1942, permits were necessary before new employment could be accepted and notice of separation was required before employment could be terminated. In addition, employers were made to report vacancies and employment advertising was controlled. Early in January 1943, National Selective Service was authorized to require anyone rejected by the armed services to accept suitable employment. By September, regulations were issued providing that an employee in an industry with the two highest labor priority ratings could neither leave nor be discharged without the permission of a selective service officer. Moreover, through a series of specific compulsory transfer orders labor had been directed to industries with a serious need. Early in June 1944, the Minister of Labor announced that 500,000 men previously rejected by the armed forces would be interviewed by selective service officials with the aim to trnasferring them to more essential employment. It was also forecast by the Minister that there would be an extension of compulsory transfer orders. He announced that an immediate survey would be undertaken of all men 16 to 40 employed in industrial or commercial establishments to review the necessity of existing deferments, to transfer men to more essential employment, and to uncover any temporary or permanent surpluses of labor.

Thus, as a result of changed military programs, reinforced by seasonal upturns in the demand for labor, the Canadian manpower situation has deteriorated rapidly since the early spring of 1944 and controls have been tightened. In the absence of further sudden changes, it is anticipated that the labor shortage will reach a peak in mid-September 1944 and will then begin to ease.

CHAPTER IV

NEW DEVELOPMENTS IN THE GENERAL WORK OF THE BOARD

A number of the new problems with which the Board is now or may soon be concerned were outlined in the introductory chapter of this report. Among those are relief and rehabilitation, relations with non-member countries, and international aspects of the adjustments in national production controls and of surplus disposal. The steps already taken to deal with these developing problems are discussed below. Because of its general nature the work of the Combined Conservation Committee is also discussed in this chapter.

RELIEF AND REHABILITATION

The several Combined Boards recommend sources of supply and determine availability of supplies to meet requirements for relief and rehabilitation in areas liberated from the enemy. These recommendations are made after appropriate consultations with the national agencies of the member governments. Supplies procured will be distributed in the liberated areas under the supervision, first, of the military, and later, either by UNRRA or by designated authorities within the liberated countries.

Relief programs are divided into three periods, (1) the military, (2) the first civilian, and (3) the second civilian. These latter two are known as the UNRRA or civilian periods. For purposes of planning, each period of responsibility is assumed to be six months. However, with the approval, or at the request of the theatre commander in an area, and the consent of the local government or recognized authority, responsibility may pass from the military authorities to UNRRA or the local civil authorities at any time. It is assumed that if the military period in any area should turn out to be less than six months, the supplies procured by the civilian authorities would be supplemented from stores provided for the military period; if it should be longer, supplies procured by the military authorities would be similarly supplemented from supplies intended for the first civilian period.

The basic purpose to be accomplished during the military period is to provide people with the minimum of food, clothes, medical care, and other supplies necessary to prevent disease and unrest. Programs for the civilian periods may, at the outset, be limited in the same way but will have the further aim of making available such supplies as will enable the country concerned to meet as far as possible its own and other countries' relief requirements. As an example, clothing supplies may at first be in the form of finished wear, then in the form of piece goods and yarn, and as soon as possible, in the form of raw wool and cotton, and may include key or ancillary textile machinery. As a general policy, liberated areas will receive relief and partial rehabilitation only in fulfillment of needs resulting directly from conditions brought by the war.

The Combined Boards determine supply availability and recommend sources of supply only for requirements presented to them by the combined military authorities, UNRRA, and the individual paying countries, which have primary responsibility for estimating the amounts needed.

Recommendations in regard to food are the responsibility of the C.F.B., in regard to raw materials of the C.R.M.B., and in regard to other commodities of the C.P.R.B.; but occasionally joint recommendations are made. The following paragraphs are written from the point of view of C.P.R.B. and do not necessa-

rily apply exactly to the other Combined Boards.

In allocating sources of supply the C.P.R.B. takes account of declared surpluses and production possibilities. Responsibility for procurement in accordance, both as to time and quantity, with the allocations made by the Board rests elsewhere. Nevertheless, the Board endeavors to maintain a current check on the extent to which allocations recommended by it are implemented.

Requirements and supply availabilities are under continual study so that as any production becomes available which can be utilized, there may be immediate action thereon.

A. Programs for the Military Period

The Board has received programs for coal, farm machinery, clothing and textiles, footwear, medical and sanitary supplies, and veterinary supplies. Sources of supply have been recommended for these requirements but in the case of coal, in view of the peculiar difficulties of supply, the situation will be reviewed in a few months. Various minor items for the military period are not programmed but are considered by the Board on a spot basis.

Although the programs for the military period include requirements for all enemy and occupied European countries as of June 15, 1944, the Combined Civil Affairs Committee of the Combined Chiefs of Staff has asked for a recommendation of sources of supply only for Northwest Europe, the Balkans, and Italy. Responsibility for the Eastern European countries and for the Far East has not as yet been finally determined. No doubt, the eventual decision will be largely influenced by what command will be in charge of operations in these areas.

B. UNRRA

A number of programs developed by UNRRA have been presented to the Board, namely, clothing and textiles, footwear, medical and sanitary supplies. These cover all to-be-liberated European countries, but in accordance with terms of the UNRRA charter do not cover enemy countries. Responsibility for countries not now covered by UNRRA programs remains to be determined. Other programs are in preparation and will be presented in the course of the next few months. Many UNRRA requirements present major supply problems, as the quantities called for in the majority of cases exceed the amounts available after providing for present military and civilian programs. In recommending sources of supply, the Board does not limit itself to the U.S., the U.K., and Canada. Other nations may be designated as sources of supply.

The Board has made a number of partial and interim recommendations. Partly because responsibility for requirements for various areas during the military period has not yet been determined, all recommendations of the Board as to source and availability of supplies for UNRRA programs have been made subject to the condition that any increase in the requirements of the military period may necessitate subsequent reconsideration and postponement of corresponding amounts for the UNRRA allocations.

C. Paying Nations

Under the agreements established at the Atlantic City Conference of UNRRA, nations having credit balances abroad may purchase their relief supplies and may administer their own relief. So far these countries are France, Belgium, Netherlands, and Norway. Such programs are presented to the Board, and UNRRA has the right to comment on them and make recommendations to the Board which will permit a fair allocation of relief supplies, in order that countries without purchasing ability may not be at a disadvantage. At the time that this report is in preparation, no complete program has been presented by any of the "paying" nations. However, the Board has been requested to approve purchases of some items including supplies necessary in the reconstruction of industries. Replies have been given to most of these requests with the understanding that subsequent information as to supplies and as to requirements from other areas may

necessitate diversion of the supplies to meet such other requirements.

D. Spot Requirements from Theatres of Military Operations

The "spot requirements" which have come forward for Italy and Sicily show that no advance planning can be expected to foresee all needs. Nevertheless, their number should decrease as programs are established. Spot requirements originate with the Allied Military Government and are forwarded to the Combined Civil Affairs Committee of the Combined Chiefs of Staff. After screening and approval by the Combined Civil Affairs Committee a requirement reaches the Board with a request for recommendation as to source of supply. The purpose of these requests, as of the C.C.A.C. programs, is to "prevent disease and unrest." Any industrial or agricultural rehabilitation is undertaken strictly on the basis of urgent necessity or immediate benefits to the conduct of the war which might be derived therefrom. As examples the following spot requirements might be cited: Supplies to bring back into production the sulphur mines in Sicily and Italy, thus saving valuable shipping space; and supplies to rehabilitate the coal mines in Sardinia; other spot requirements are for a variety of items, for example, medical supplies, paper, thread, needles, paint, machinery parts, and twine for fish nets. The C.P.R.B. has determined availability and source of supply to meet most of these requirements after consultation and agreement with the national supply authorities. Arrangements for simplifying the present spot-demand procedure are being considered.

C.P.R.B. Procedures

A Central Section for Relief and Rehabilitation, composed of U.S., U.K., and Canadian representatives has been set up jointly by the C.P.R.B. and C.R.M.B. It is responsible for liaison with C.P.R.B. committees. Specific recommendations made by the Board on items with which the committees are concerned are discussed elsewhere in this Report.

On the U.S. side of the Board, the Foreign Division of the WPB acts as staff for the Central Section; the Section is responsible for liaison with the WPB Divisional Requirements Committees where there is no C.P.R.B. committee. The Central Section maintains contact with the Mission for Economic Affairs in London. The U.K. and Canadian sides collaborate with the organizations set up to handle relief questions in London and Ottawa. With the shift of military operations to Northwest Europe, it is likely that urgent requisitions presented in London will, if possible, be met from the U.K. after consultation between the Joint U.S. Group (M.E.A. and the Army) and the British Supply authorities through the Official Committee on Liberated Areas and the Civilian Goods Committee. It is understood that periodical reports on such requisitions will be made to the C.P.R.B. through C.C.A.C. (S).

RELATIONS WITH NON-MEMBER COUNTRIES

When the Combined Boards were established in 1942, there already existed a number of arrangements for Anglo-American consultation with third countries, or groups of countries, for example, the British-American Coordinating Committee in Ankara, and the Middle East Supply Center. Moreover, for the coordination of the resources and requirements of British Commonwealth countries other than Canada, regular machinery was established early in the war. This developed in 1942 into the Commonwealth Supply Council, under the Chairmanship of the Minister of Production.

During the two years of the C.P.R.B.'s existence, the relation between the Board's work and the problems of non-member countries has become closer. For critical commodities both supply and requirements from non-member countries have played an increasing part in the work of the Board's committees. In the future, as occupied countries are liberated and as the volume of civilian production grows and ocean shipping is re-

leased for civilian goods, the need for direct collaboration with non-member nations will increase not only for the purposes of relief and rehabilitation, but also to take proper account of other civilian requirements of various non-member countries and of the contributions they can make as producers.

For information on, and for the execution of its recommendations affecting non-member countries, the Board has in the past relied mainly on informal consultation by the member country best placed for this in any given case.

The Board has received programs of import requirements for the French Colonial Territories from the Combined Policy Committee for French Empire Economic Affairs and has been asked to advise on those items in which it is interested. It has also been asked to advise the U.S. State Department and the British Embassy in their negotiations of War Trade Agreements with European neutrals. On wider issues, the recently formed Tripartite Committees of the U.S. State Department, British Embassy, and representatives of the French and Belgians may play a part in the examination of questions of political and economic policy antecedent to the operations of C.P.R.B.

Recently through appropriate diplomatic channels the C.P.R.B. established, for the first time, a direct relationship between one of its committees handling a special commodity and two important non-member producing countries. Representatives of Mexico and Brazil were recently invited to Washington for the discussion of textiles; the missions met with the Textile Committee of the C.P.R.B. and a joint examination was made of potential production in each of the countries, of the distribution of its exports, and of the contribution which it could make to European relief. Arrangements have been made for maintaining these relationships, including the exchange of information, through the Washington Embassies of the two countries. This development has been of great help to combined planning of the production and distribution of textiles.

Such working arrangements with non-member countries are capable of adaptation and extension to meet new circumstances.

RELAXATION OF PRODUCTION AND MATERIAL CONTROLS

Towards the end of 1943, with the prospect of surpluses of some materials, and in spite of increasing manpower difficulties, the possibility of easing some restrictions on the production of civilian goods emerged. From the combined planning point of view it seemed desirable that each country should know what the others had in mind. Moreover, it was desirable to prevent as far as possible the international misunderstandings which might occur if one country resumed civilian production of any article without informing the others in advance of its intention to do so. For this reason the three countries agreed last January to advise one another through the C.P.R.B. when any adjustments of controls which will result in substantially increased use of critical materials, manpower, or facilities for the manufacture of civilian items are under serious consideration. In this way each can examine the impact of any such proposed action on its own problems and make appropriate representations. It is understood that prompt action may be required and that the arrangement does not imply the right of any country to veto the plans of another.

In accordance with this agreement a central office has been established in the C.P.R.B. Each country has named one agency to be responsible for (a) obtaining and transmitting to C.P.R.B. information about specific adjustments being seriously considered by its agencies, and (b) acquainting its agencies, according to their interests, with proposed adjustments reported by the other countries. The central channel of information thus established is intended to supplement and not to replace other special channels where they already exist, e.g., on raw materials, between the U.S. and U.K. staffs of C.R.M.B.

SURPLUS DISPOSAL

Under various circumstances there may be need for combined consideration of the disposal of surplus stocks accumulated during the war. Thus there may be need for consultation if two or more member countries should have occasion to dispose of a given surplus abroad.

The C.P.R.B. affords a means for combined consideration of problems of surplus disposal. Where the surplus commodity involved comes under the terms of reference of a C.P.R.B. committee the existence of the committee will facilitate such combined consideration.

To some extent, it will be possible to meet requirements for relief and rehabilitation out of surpluses located in the U.K., Canada, and the U.S., and in theatres of operations, and occasionally out of captured goods. In order to make use of the surpluses in the hands of the national surplus disposal agencies, the C.P.R.B., in connection with its review (as to source and availability of supply) of relief requirements, may consider the extent to which the requirements can be met out of surpluses and advise accordingly.

CONSERVATION

(THE COMBINED CONSERVATION COMMITTEE—FORMED JULY 1943—JOINT WITH C.R.M.B.)

The changing emphasis in the U.S., the U.K., and Canada from the scarcity of materials and production facilities to the shortage of manpower has been reflected in the work of the Combined Conservation Committee. In the past the Committee devoted a large share of its energy to matters dealing with conservation of materials and the introduction of substitutes; now its major efforts are directed toward the improving of production methods through the more effective use of resources.

There has been a constant and continuous flow of technical information between the U.S. and the U.K. While the military services of the two countries maintain a direct line of communication on such matters, technical information pertinent to materials and facilities for manufacturing has been exchanged by the C.P.R.B. through a liaison arrangement with the Mission for Economic Affairs in London.

In response to an invitation extended by the U.K., the formation of a joint U.S.-Canadian Screw Thread Mission to pay a return visit to the U.K. is being completed. The subjects to be discussed by this Mission include truncated Whitworth threads, Acme threads, unification of British and American threads, pipe threads, screw threads for compressed gas cylinders, Buttress threads, high-duty studs for non-ferrous castings, and cylindrical fits.

The screw thread problem, although outstanding, is only one of the many problems of standards which acquire new importance as the period of relief, rehabilitation, and reconstruction is approached. The treatment of combined production as a pool from which to meet the needs of continental Europe would clearly be facilitated by the adoption of standards which would permit complementary use of U.S., British, and Canadian products. In addition, standardization of nomenclature would ease many of the administrative problems which will be faced by the United Nations relief organization. A number of aspects of this question are being considered by the Conservation Committee.

At the request of the British, an exchange of information on the U.S. developments on rubberless adhesive tape is being undertaken. Some progress by an American research laboratory in the development of a pressure-sensitive rubberless adhesive tape has been reported by Office of Production Research and Development and arrangements have been made

to effect a meeting between British and U.S. representatives to discuss this matter.

In the conservation of leather, the Committee is taking active interest in three programs: the utilization of pigskin for footwear; the substitution of cotton webbing in harness; and the promotion of oil treatment of sole leather. A number of sample shoes made entirely of pigskin have been produced in the U.S. and are undergoing laboratory and field tests, and the technical problems relating to the flaying operations are receiving considerable study. Specifications for cotton web harness and a canvas horse collar have been prepared and a program for the U.S. production of 60,000 sets (to be used in relief and rehabilitation) has been approved. Samples of these items have been sent to the U.K. A program for the voluntary adoption of oil treatment of soles by U.S. shoe manufacturers has been undertaken by the Conservation Division, WPB.

As a result of an investigation initiated by the Committee on the subject of steel drums for the Near East, a new survey of Anglo-American requirements for steel drums is being made by the appropriate authorities with a view to obtaining more dependable estimates of requirements for new drums and promoting the re-used drums.

CHAPTER V

CRITICAL EQUIPMENT

In the first six months of 1944, serious difficulties were encountered in meeting combined production schedules for several civilian-type equipment items in which the C.P.R.B. is interested. For trucks, internal combustion engines, and agricultural machinery, the scarcity of forgings and castings and automotive components, attributable to both manpower shortages and to the requirements of competing programs, was a primary factor in the lag of production behind sharply rising schedules. This was particularly true for heavy trucks and internal combustion engines. An acute shortage of truck and bus tires has persisted, not only because of very heavy military demands for certain special types and sizes, but also as a result of inadequate facilities and technical difficulties in converting from crude to synthetic rubber, combined with labor shortages in the industry. In the machine tool industry, there was a rapid reversal of the earlier trend to an easy supply position. As a result of the sharply increased requirements resulting from the revised heavy ammunition program and the diversion of manufacturing capacity in the machine tool industry to other war production, it was indicated that requirements in 1944 could be met only by the careful relocation of idle tools. A major concern of the C.P.R.B. with respect to agricultural machinery, public utilities equipment, and transportation equipment has been to make provision for the requirements of liberated areas. Relief requirements for agricultural machinery have been submitted to the C.P.R.B. by both the military authorities and UNRRA, and provision has been made for meeting relief needs from the production of the member countries. While, by mid-1944, relief requirements for transportation and public utilities equipment were not definite, an analysis of supply and requirements was in process by the C.P.R.B. and arrangements were being made to provide equipment for which future needs were ascertainable. This chapter describes in greater detail the position of various items of critical equipment with which the C.P.R.B. is concerned.

AGRICULTURAL MACHINERY

(COMBINED AGRICULTURAL AND FOOD MACHINERY COMMITTEE—FORMED DECEMBER 1943—JOINT C. P. R. B.—C. F. B.)

Since its formation in December 1943, the Agricultural and Food Machinery Committee of the Combined Food Board and the C.P.R.B. has reviewed the requirements-supply position of the U.S., U.K., and Canada for the farm machinery production year ending June 30, 1944. 1/ It has also reviewed the production schedules of these countries for the year ending June 30, 1945 and the known and estimated 1944-1945 requirements against such production for home use and for export (including liberated area requirements).

The chief concern of the Committee has been to formulate recommendations insuring: (a) full provision for meeting requirements, and; (b) use of the best sources of supply considering shipping, past usage, service, existing spare part stocks, consumer preference, and other pertinent economic factors. In accordance with the Committee's recommendation, the three supply areas combined are scheduled to produce during 1944-1945 a tonnage sufficient to satisfy completely the stated minimum essential requirements of all claimants (except a portion of liberated area requirements). Scheduled total production approximates 2,435,000 short tons of farm machinery—2,047,000 tons in the

1/ Year ending September 30 in the case of the U.K.

U.S., 253,000 in the U.K., and 161,000 tons in Canada.

One of the more important matters dealt with by the Committee has been the requirements of liberated areas. Although on the whole such requirements (186,000 short tons) represent only a relatively minor proportion of the total production of the three supply areas combined, their specialized nature has required special treatment. The following summarizes the Committee's action on these requirements.

Early in 1944 a tentative program of requirements was approved by the Combined Supply Committee and endorsed generally by UNRRA. It was assumed that the machinery included in this program would be required in the eighteen months following liberation, and that any requirements for the military period immediately following liberation (assumed to be six months), as well as for the subsequent period of civilian control, would be met from this total tonnage. These requirements were submitted to the Committee for recommendations as to sources of supply, and in February 1944, the Committee recommended that 127,000 tons be supplied by the U.S., 32,000 tons by the U.K., and 27,000 tons by Canada.

The Committee based its recommendations upon the ability of each country to produce that portion of the requirements allocated to it without interference with its existing war and essential civilian production schedules, and upon consideration of the availability of labor. None of the items required by the liberated area program was strictly in short supply, although it was recognized that because of the component situation and the availability of labor, particularly in the U.S. and Canada, certain items would be more difficult to produce than others. In the U.S. and Canada, where production was capable of being expanded to meet the liberated area requirements, the allocation to each country was made roughly proportionate to the total farm machinery production capacity of each country. In the U.K., which has been operating at maximum capacity, the amount of machinery and equipment available for the liberated areas represented the difference between the machinery and equipment which the U.K. was capable of producing and the requirements (mostly domestic) against such production.

Early in April 1944, the first schedule of requirements for the military period, totalling approximately 25,000 tons, was submitted to the Committee by the C.C.A.C.; the Committee promptly recommended sources of supply to meet them. The U.S. and the U.K. have already scheduled the production of their allotments of farm machinery for the military period, and it is expected that U.S. production will be completed in the second half of the calendar year 1944 and the first quarter of the calendar year 1945; U.K. production should be completed prior to December 31, 1944. The machinery allocated to Canada is being scheduled for production, and it is expected that it will be produced in the second half of the calendar year 1944 and the first half of the calendar year 1945.

An additional schedule of requirements for the military period is expected in the near future, as well as a definite schedule of the requirements for the period of civilian control.

The U.S. Position

U.S. production authorized for the year ending June 30, 1944 amounted to about 2,000,000 short tons (weight of machines). Incomplete reports indicate that this production was substantially achieved, despite difficulties in the earlier months of the current year caused by military demands for common components which competed directly with the farm machinery program. In the case of certain items there may be greater production than scheduled.

The authorized production of farm machinery for 1944-1945 amounts to approximately the same figure, i.e., 2,047,000 short tons. This is sufficient to provide the stated requirements upon the U.S., including part of the requirements for the liberated areas amounting to approximately 50,000 short tons of machin-

ery. Approximately 30,000 short tons of carbon steel and related materials will be required to manufacture these 50,000 short tons of machinery for the liberated areas and the WPB has authorized the use of steel and related materials for the purpose. The initial requirements for the military period will be met by use of a part of this steel tonnage. In addition to the 30,000 short tons of carbon steel, approximately 48,000 short tons will be needed to produce the U.S. share of the balance of the liberated area requirements (some 80,000 short tons of machinery), including both military and civilian requirements. The farm machinery industry in the U.S. is capable of expansion to meet the balances of these liberated area requirements. It is, therefore, anticipated that the U.S. will be able to meet its share of the liberated area requirements in full.

The potential 1944-1945 production based on the easing of war contracts is about 2,315,000 short tons (weight of machinery). This is the equivalent of the production on an item-by-item basis for either 1940 or 1941, whichever was higher. Although production facilities for farm machinery were converted to ordnance to a small extent only, the realization of the potential production will depend on the falling off of military requirements of critical components for landing craft and other items, and on the labor situation. Castings, bearings, steel chains, and engines are among the critical components which are needed in the production of farm machinery.

The manufacture of spare and replacement parts is now unrestricted in the U.S., and the volume of this production is the equivalent of 15-20 percent of the total production of farm machinery, equalling approximately 155 percent of such production in 1940. Crop production goals for 1945 have not increased substantially over 1944 (less than one percent), and the supply of food in the U.S. appears to be more than adequate to meet requirements.

The Canadian Position

In Canada the production quotas for the different types of farm machinery have increased appreciably for 1944-1945 over the 1943-1944 period, and are sufficient to meet requirements upon Canada. The authorized level of production for the year 1943-1944 was approximately 106,000 short tons of machinery, while for 1944-1945 production will amount to about 161,000 short tons. Quota restrictions on the manufacture and sale of repair parts have been removed. The Canadian share of the liberated area requirements is being scheduled in accordance with the recommendations of the Committee, namely 27,000 short tons for production in the latter part of 1944 and the first half of 1945. Crop production goals for 1945 are the same as those for 1944.

The U.K. Position

The U.K. farm equipment industry has been operating at full capacity during its 1944 farm machinery year, October 1, 1943 to September 30, 1944, and will continue to do so during the year ending September 30, 1945. U.K. production schedules are currently being met. The total production for the 1943-1944 farm machinery year is approximately 256,000 short tons; for 1944-1945 253,000 short tons. From 1943-1944 production approximately 20,600 short tons are earmarked for liberated areas to provide for both the civilian and military periods; approximately 8,300 short tons are earmarked for export. From 1944-1945 production approximately 11,700 short tons are earmarked for the liberated areas, and about 7,700 short tons will be exported to other areas. The balance of U.K. production is needed by the U.K. itself in order that it may carry out its wartime food production campaign. In addition to those items needed by the U.K. from its domestic production it also requires from the U.S., Canada, and Australia certain items which are either

not manufactured in the U.K. or for which U.K. domestic manufacture is insufficient to satisfy minimum essential requirements.

Food Processing Machinery

The Committee's terms of reference include food processing machinery, as well as agricultural machinery and equipment, but to date no requirements for food processing machinery for the liberated areas have been presented to the Committee for consideration. Some discussions have taken place relative to such items, and the availability of certain milling machinery in the U.K. has been reported to the military authorities and to UNRRA.

TIRES AND TUBES

(TIRES AND TUBES COMMITTEE—FORMED OCTOBER 1943)

During the first half of 1944, tire production in the U.S., the U.K., and Canada fell short of the stated requirements of the three countries by 32 percent. The deficit was especially serious for types of tires for which there is the most urgent strategic demand.

For truck and bus tires of 10 ply and up, production in the three countries was only 72 percent of requirements in the first quarter of the year and 61 percent in the second quarter. The percentages were even lower for certain extra large sizes for tank transporters. On the other hand, the number of airplane tires made during the first half of 1944 was within 3 percent of requirements.

The shortfall in tire production occurred despite completion of a substantial part of a facilities expansion program in the U.S. and the assignment of top preferences for manpower, facilities, and materials in the three countries for the production of truck- and bus-type tires.

The failure to produce tires in quantities sufficient to equal stated requirements during the first six months of the year has not yet necessitated reduction in the motor vehicle production programs of the three countries, nor caused the immobilizing of any substantial number of vehicles required for military and essential civilian transportation purposes.

With the accumulation of deficits, however, and the prospect of continued shortages in the third quarter, the situation in the U.S., particularly for heavy-duty tires, has become acute. A drastically revised Essentiality List has been prepared (July 22) to govern allocations of truck and bus tires for civilian vehicles, and allocations will be insufficient to provide replacement tires for many classes of vehicles for which replacement tires have hitherto been available. Moreover, it has now become necessary to consider cutting motor vehicle production programs.

During the second half of 1944, stated tire requirements will again exceed production possibilities, and the cumulating deficit may have serious repercussions on the combined motor vehicle production programs or on the ability to maintain existing rubber-tired transportation facilities in operation.

In order to increase truck and bus tire production and minimize the adverse effects on the war program resulting from these deficits it will be necessary to insure an adequate labor force, encourage greater labor productivity, particularly in the U.S., and speed up the expansion program for facilities and equipment. If the war in Europe continues into the fourth quarter it may well be necessary, particularly in the U.S., to take further steps to insure use of existing tires solely for most essential purposes.

Combined tire production in the last six months of the year is estimated at 85 percent of stated requirements. Production of truck and bus tires of 10 ply and up is estimated at 75 percent of requirements for the period. These percentages show an improvement over the first half of the year, but the cumulative deficits of production in relation to stated requirements will continue to increase.

Table 10 shows combined tire requirements and production estimates for the U.S., the U.K., and Canada by quarters for 1944.

The most important factors limiting production in the next half year are: (1) manpower shortages; (2) the need for additional production facilities for particular types and sizes of tires, and; (3) production difficulties of a technical nature arising from the conversion from crude to synthetic rubber for tire production.

Although certain component materials, notably carbon-black and tire cord, are in tight supply, it is not expected that 1944 tire production will be limited by shortages of these or other materials. Adequate supplies of synthetic rubber are in sight during the next six months to meet tire production needs. Stocks of synthetic rubber on hand at the end of 1944 in the U.S., the U.K., and Canada will have increased to more than 100,000 long tons, but the crude rubber stockpile will be reduced to approximately 175,000 long tons. This is somewhat less than three-fourths of the stocks of 241,000 tons of crude rubber on hand as of January 1, 1944. A substantial

Table 10.—COMBINED NEW TIRE REQUIREMENTS AND PRODUCTION ESTIMATES FOR THE U.S., THE U.K., AND CANADA BY QUARTERS FOR 1944 a/
(Unit - Thousand Tires)

PERIOD	TYPE OF TIRE									
	Total	Airplane	Truck and Bus				Tractor and Farm Implement	Solid Industrial b	Pneumatic Industrial	Passenger and Motorcycle
			Total	Combat and Runflat	10 Ply and Above	8 Ply and Under				
Combined Production Estimates										
Total	48,809	2,156	18,289	238	7,701	10,350	2,267	990	694	24,413
1st Quarter	9,885	510	4,299	75	1,783	2,441	608	154	150	4,164
2nd Quarter	11,351	519	4,337	47	1,796	2,494	568	246	193	5,488
3rd Quarter	13,261	553	4,554	64	1,905	2,585	520	289	176	7,169
4th Quarter	14,312	574	5,099	52	2,217	2,830	571	301	175	7,592
Combined Requirements										
Total	63,721	2,257	22,780	319	10,875	11,586	2,346	1,293	599	34,446
1st Quarter	15,674	528	5,545	92	2,486	2,967	635	371	103	8,492
2nd Quarter	15,693	528	5,963	71	2,917	2,975	562	279	150	8,211
3rd Quarter	15,578	585	5,578	80	2,676	2,822	605	308	175	8,327
4th Quarter	16,776	616	5,694	76	2,796	2,822	544	335	171	9,416
Surplus or Deficit (-) of Production										
Total	-14,912	-101	-4,491	-81	-3,174	-1,236	-79	-303	+95	-10,033
1st Quarter	- 5,789	- 18	-1,246	-17	- 703	- 526	-27	-217	+47	- 4,308
2nd Quarter	- 4,342	- 9	-1,626	-24	-1,121	- 481	+ 6	- 33	+43	- 2,725
3rd Quarter	- 2,317	- 32	-1,024	-16	- 771	- 237	-85	- 19	+ 1	- 1,158
4th Quarter	- 2,464	- 42	- 595	-24	- 579	+ 8	+27	- 34	+ 4	- 1,824
Production by Country										
Total	48,809	2,156	18,289	238	7,701	10,350	2,267	990	694	24,413
United States	42,924	1,685	15,488	116	5,342	10,030	2,082	947	634	22,088
United Kingdom	3,881	425	1,884	63	1,602	219	70	38	59	1,405
Canada	2,004	46	917	59	757	101	115	5	1	920
Requirements by Country										
Total	63,721	2,257	22,780	319	10,875	11,586	2,346	1,293	599	34,446
United States	56,226	1,796	18,912	158	7,556	11,198	2,163	1,249	535	31,571
United Kingdom c/	5,607	425	3,052	134	2,591	327	88	40	61	1,941
Canada	1,888	36	816	27	728	61	95	4	3	934

a/ Including revisions through July 7 b/ Excluding U.S. bogie rollers and U.K. tank and track carrier tires.
c/ Including net deficits of British Empire countries other than Canada and a debasement allowance of 35,000 tires in the third quarter. Excluding tires on vehicles made available to the U.K. from the U.S. and Canada.

part of the stocks at the end of 1944 will consist of guayule and wild rubbers which are difficult to use in manufacturing tires. Nevertheless, in order to conserve as far as possible the dwindling stocks of crude rubber, it has been the policy of national agencies, in spite of the production difficulties involved, to accelerate the conversion from crude to synthetic rubber in tire production wherever possible.

The U.K. had expected some improvement in the labor situation in the second half of the year; latest reports, however, indicate that there will be no improvement, and production estimates which were developed earlier in the year will require some downward revisions. Shortage of manpower, indeed, on both sides of the Atlantic has been the most important factor limiting production in the past half year; it will continue to limit output during the next six months.

Total employment in the U.S. tire manufacturing industry on June 1 was approximately 62,000. About 6,000 additional workers were needed as of that date to operate existing equipment for the greatest possible production of large truck and bus tires. Even more workers would have been required except for the fact that the facilities expansion program in the U.S. is several months behind schedule. But it is estimated that by November 1, 1944 a total of 74,000 workers will be required for tire production in the United States —an increase of 12,000 over June 1 employment levels. The extension from July 1 of the War Manpower Commission's priority referral plan should assist in meeting these requirements.

Labor productivity in U.S. tire factories continues to be adversely affected by a high rate of labor turnover and absenteeism, by changes in tire specifications required in the conversion from use of crude to synthetic rubber, by the normal let-down in productive effort at times when piece work rates are in process of revision (because of changes in tire specifications), and by the changes in production processes accompanying the expansion and rearrangement of facilities.

In order to provide for increased tire production, a facilities expansion program to cost between 70 and 80 million dollars was begun in the U.S. at the end of 1943 and scheduled for completion by September 1944. This facilities expansion program was no more than 50 percent completed by June 1 because of the shortage of installation labor and equipment delays. An additional expansion program estimated to cost approximately 10 to 15 million dollars has been authorized to provide more facilities for manufacturing large truck-type tires. The operation of these new facilities, however, is not expected to result in any substantial increase in tire production before the fourth quarter of the year.

In the U.K. also, consideration is being given to expansion of facilities for the production of these large tires. Manpower limitations in the U.K., however, do not permit full use of the facilities already available, and any expansion there will not increase the total tire production as measured by the amount of rubber consumed.

In addition to the manpower shortage and the inadequacy of facilities, there have been production difficulties arising from the technical problems of converting from crude to synthetic rubber. The production of synthetic in the U.S. in fact, has been up to estimate, but difficulties in the manufacture of tires from synthetic have made the quantity used less than was estimated.

Technical production difficulties arising from the conversion to synthetic rubber were in part responsible for several downward revisions in production estimates for the U.S. and Canada during the first half of 1944. These problems are being solved but it is expected that additional downward revisions in production estimates may be required until the conversion is completed. Such downward revisions may be proportionately more serious in the U.K. and Canadian production estimates since the conversion from crude to synthetic rubber has not progressed as far as in the U.S. Further reductions in over-all tire production estimates may also be expected if airplane sorties over Europe and in the Pacific continue at present rates

and require the shifting of facilities from the production of truck-type tires to airplane tires, since the production of the latter requires more man-hours of labor and materials than the former.

The net conclusion as to the combined tire situation for the second half of 1944 is that production will be considerably below stated requirements and even below the production estimates shown in Table 10. Preliminary estimates of U.S. and U.K. requirements and production for the first half of 1945 indicate that the situation will deteriorate rather than improve during that period, with stated requirements continuing to exceed production possibilities for truck, bus, and passenger car tires.

During the first six months of 1944, the principal activity of the Tires and Tubes Committee has been to recommend allocations of truck and bus tires to the U.S., the U.K., and Canada for each of the first three quarters of 1944. The Committee has limited its recommendations to truck and bus tires because stated requirements for other groups of tires were being substantially met or because full satisfaction of the requirements for the other groups was considered to be of less pressing concern in the war program.

The allocation recommendations of the Committee were based on the "parity principle." This principle, in effect, provides each of the three countries with the proportion of combined new supply which its stated requirements represent of total combined requirements. Its equity rests on the assumption that the requirements of all three countries are stated at the same level. As for military requirements, there is no reason to believe that they have, in the main, been overstated. It is difficult, however, to discover a yardstick by which to compare civilian use in the U.S. with civilian use in the U.K. and Canada. Consideration must be given, not only to actual numbers of persons and vehicles, but also to the extent of the country, the availability of alternative forms of transport, and the fact that the people in Great Britain have been disciplined by danger to greater curtailments in civilian supplies.

The over-all shortage of tires has resulted in the careful examination on both sides of the Atlantic by civilians of the military requirements and of civilian requirements by military claimants, at least for critical items. Consequently the Committee has felt justified in planning on the basis of stated requirements.

To date, the recommendations of the Committee have been based on requirements and production estimates of the U.S., the U.K., and Canada. Consideration is being given to the possibility of substituting in future allocation recommendations total requirements and production of other British Empire countries in place of net import requirements of these countries.

INTERNAL COMBUSTION ENGINES

(INTERNAL COMBUSTION ENGINE COMMITTEE—FORMED SEPTEMBER 1943)

The Internal Combustion Engines Committee was formed to study the combined supply and requirements pattern and to recommend plans for the efficient distribution of the productive capacity of the member countries. In 1943 a serious combined deficit of liquid-cooled engines had developed, due chiefly to component shortages caused by inadequate labor supply. The supply position of air-cooled gasoline engines, on the other hand, has been much easier.

In the first half of 1944 no improvement in the U. S. position was evident. Production of liquid-cooled engines in the first quarter fell moderately short of orders on the manufacturers' books. The difficulty of maintaining the labor supply in forges and foundries in the hot months of the summer, however, indicated an increasing lag in production. In the first half of 1944 requirements were restated on the basis of orders on the books of the manufacturers. This tabulation indicated that orders exceeded forecast production by about 8 percent. Actual U.S. requirements, however, are considerably in excess of the

volume of orders accepted by manufacturers. The production of internal combustion engines is being scheduled by WPB on the basis of orders placed with manufacturers, supplemented in specific instances by data on requirements.

In the U.K. the latest available information shows no appreciable change in the supply and requirements position. In view of the shortage in the U.S. it has been impossible to supply substantial quantities of internal combustion engines to alleviate the U.K. deficit. Nevertheless, in the first half of 1944, it has been possible to make some small allotments of certain engine types to the U.K. as a result of agreements reached between the U.S. and the U.K. military authorities.

The Internal Combustion Engines Committee has not met since January 1944 to consider any further adjustments in the combined production or requirement of engines. The study of requirements, mentioned in the December 31, 1943 report of the C.P.R.B. was abandoned because of difficulties encountered in tabulating over-all U.S. requirements.

In Table 11, the supply and requirements of both air-cooled and liquid-cooled internal combustion engines are shown for the U.S. and the U.K. It should be noted that the U.S. data exclude tank and aircraft engines, while the U.K. figures exclude, in addition to these types, all engines for wheeled vehicles.

TABLE 11.—SUPPLY AND REQUIREMENTS FOR INTERNAL COMBUSTION ENGINES, 1944 a/

(Unit - Thousand)

COUNTRY	Air-cooled, under 30 H.P.	Liquid-cooled		
		Gasoline	Diesel, 750 RPM and over	Diesel, under 750 RPM
United States				
Prod. in 1st quarter	175	423	43	*
Est. prod. for year	906 b/	1,692	160	*
Requirements	662 c/	1,838 c/	202 c/	*
Surplus or deficit (-)	+244 b/	-146	-42	*
As % of requirements	+37%	- 8%	-21%	*
United Kingdom				
Prod. in 1st quarter	21	14	5	0.7
Est. prod. for year	88 b/	56	22	3
Req. (not met by U.S.)	78	66	30	4
Surplus or deficit (-)	+10 b/	- 10	- 8	-1
As % of requirements	+13%	- 15% d/	-27%	-25%

a/ Excluding tank and aircraft engines for both the U.S. and the U.K.; excluding wheeled automotive vehicle engines for the U.K.

b/ Production figure is capacity, which will be held down to requirements.

c/ Including only firm manufacturers' orders and is therefore considerably less than the total demand. The following U.K. requirements are included: Air-cooled - 12, Gasoline - 5, and Diesel (750 RPM and over) -7.

d/ Requirements and supply of gasoline engines for trucks are understood to be in approximate balance. A percent deficit is not shown, but if truck engines were included it would probably be less than 6 percent.

* Not available.

TRUCKS 2/

(COMBINED TRUCK COMMITTEE—FORMED NOVEMBER 1942)

Heavy trucks continue to be one of the most difficult 1944 production problems. The problem centers in the U.S. The downward revision of U.S. military requirements for these vehicles (including International Aid) which was made in February brought requirements in line with the production program as of the first of the year. The combined program still stands at 79,000 vehicles of heavy-heavy and medium-heavy types (4 tons capacity and over) for the military and at 90,000 including civilian types.

Steps taken in the U.S. to meet this program, as noted in the December 31 report, include additional facilities for components, tightened component scheduling controls, and Class I urgency ratings to aid in obtaining the necessary labor. In spite of these steps, production of heavy vehicles failed to meet schedules by a substantial margin in the first half of the year. Moreover, the situation in the U.S. in forge and foundry labor, on which the success of the motor vehicle program depends, continues to be extremely critical.

In spite of recent action giving to heavy trucks the same "special directive treatment" accorded landing craft and heavy artillery, prospects of meeting

2/ The truck classification used in this section is as follows:

Class of Truck	Military Rated Capacity	Commercial-GVW
Heavy-heavy and medium-heavy	4 tons and over	24,001 lbs. & over
Light-heavy	2½ ton (U.S.) & 3 ton (British)	16,000-24,000 lbs.
Medium	1½ ton	9,000-15,999 lbs.
Light	¾, 3/4, and 1 ton	0-8,999 lbs.

the sharply rising heavy truck schedules during the last half of the year are not bright.

Table 12 summarizes the combined truck production programs for 1944.

TABLE 12.—COMBINED 1944 PROGRAM FOR HEAVY TRUCKS AND ALL WHEELED MOTOR VEHICLES a/

(Unit - Each)

TYPE OF VEHICLE AND COUNTRY OF PRODUCTION	Heavy-heavy and Medium-heavy Trucks	All Wheeled Motor Vehicles
All Vehicles - Combined Total	89,930	1,099,478
United States	82,059	799,788
United Kingdom	7,724	136,449
Canada	147	167,235
Military Vehicles - Combined Total	79,203	932,145
United States	73,690	668,925
United Kingdom	5,515	110,227
Canada	0	152,993
Civil Vehicles - Combined Total	10,727	167,327
United States	8,369	126,863
United Kingdom	2,209	26,222
Canada	147	14,242

a/ As of May 8, 1944. Including all types of wheeled and half-track vehicles, armored and unarmored except integral busses and off-the-highway trucks. In 1944, 6,960 integral busses (light-heavy type) are scheduled in the U.S., some of which are for Canada; 1,629 off-the-highway trucks, all of the heavy-heavy type, are scheduled in the U.S., and a small additional number are scheduled in Canada.

In the production of military vehicles the U.S. is responsible for nearly three times the combined production of both the U.K. and Canada—668,900 compared to 263,300. In the production of civilian vehicles the U.S. is responsible for more than three times the combined production of U.K. and Canada—126,800 against 40,400. Furthermore, the Canadian output, and to a much smaller degree, the U.K. output, are dependent upon U.S. production of truck components such as axles, transmissions and engines. Table 13 shows how distribution of 1944 truck production will be made in the U.S., the U.K., and Canada.

U.S. Production

In view of the large share of the truck production assigned to the U.S., special comments on U.S. production are in order, particularly regarding heavy trucks. In this category the total military program called for 11,971 heavy-heavy vehicles in the first quarter against which 11,163 were produced, a deficit of 808 vehicles, or about 7 percent. The second quarter military program called for 16,768 heavy-heavies; second quarter production totalled 12,891 vehicles, 3,877 short of program for the quarter, or about 23 percent. With respect to civilian vehicles of the heavy-heavy type, the first quarter program called for 1,668 vehicles against which were produced 1,197, a deficit of about 28 percent. In the second quarter, 1,598 civilian heavy-heavy vehicles were programmed, against which production in the second quarter amounted to 2,231, about 40 percent over the program.

In the light, medium, and light-heavy categories, U.S. production in the first quarter of 1944 was somewhat better. In the first quarter, 64,886 light trucks were programmed for military use and 63,686 were produced; 38,903 medium trucks were programmed for military use and civilian use against which 39,706 were produced; and 64,586 light-heavies were programmed against which 63,206 were produced.

The total number of vehicles of all sizes and types, military and civilian, programmed for production in the United States in the first quarter of 1944 was 182,014, against which 178,958 were produced, a deficit of 3,069 vehicles, or less than 2 percent.

Table 14 shows the U.S. truck production program for 1944, for military and civilian vehicles according to production schedules revised as of July 13, 1944.

In the U.S. all truck production programs, i.e., U.S. Ordnance, Canada, A.R.C.O., Navy, civilian, and off-the-highway vehicles, are treated as being of equal urgency. Consequently, if a shortage of vehicles results from shortages of any component going into these vehicles or from other causes, all vehicle programs will be cut equally, military and civilian alike.

Facilities are no longer a significant limiting factor in meeting sched-

TABLE 13.—DISTRIBUTION OF COMBINED PRODUCTION OF WHEELED MOTOR VEHICLES IN 1944a/
(Unit - Each)

COUNTRY OR AGENCY	CLASS OF VEHICLE							
	TOTAL	Heavy-heavy Trucks	Medium-heavy		Light-heavy and Medium		Light	
			Trucks	Armored	Trucks	Armored	Trucks	Armored
Total combined production	1,099,472	34,522	55,008	400	654,791	11,434	331,482	11,835
Military vehicle allocations	952,145	30,220	48,585	400	506,698	11,434	322,893	11,835
United States	361,772	14,903	34,417	0	185,857	4,630	123,674	291
British Empire b/	329,550	13,468	11,333	400	167,853	3,498	121,474	11,544
Other	240,823	1,849	2,835	0	155,088	3,306	77,745	0
Civil vehicle allocations	147,327	4,302	6,423	0	148,013	0	8,589	0
United States	101,863	3,957	4,167	0	93,739	0	0	0
British Empire b/	25,660	223	2,133	0	34,715	0	8,589	0
Other	19,804	122	123	0	19,559	0	0	0
U.S. production	795,788	31,298	50,761	0	458,553	10,324	244,561	291
War Department	332,462	11,020	32,972	0	164,155	4,630	119,394	291
Navy Department and A.R.C.O.	29,310	3,883	1,445	0	19,702	0	4,280	0
Int. aid: British Empire c/	78,330	10,467	9,219	0	9,114	2,388	47,142	0
Other	226,823	1,849	2,835	0	147,088	3,306	73,745	0
U.S. civil	101,863	3,957	4,167	0	93,739	0	0	0
Civil exports: Br. Empire d/	5,196	0	0	0	5,196	0	0	0
Other	19,804	122	123	0	19,559	0	0	0
U.K. production	136,449	3,224	4,100	400	74,875	1,110	48,240	4,500
War Office	89,881	2,201	2,070	400	47,200	1,110	32,400	4,500
Air Ministry and Admiralty	20,346	800	44	0	10,581	0	8,921	0
U.K. civil	26,222	223	1,966	0	17,094	0	6,919	0
Canadian production	167,235	0	147	0	121,363	0	38,681	7,044
War Office	102,956	0	0	0	81,887	0	15,869	5,200
Air Ministry and Admiralty	3,292	0	0	0	3,292	0	0	0
Canadian military f/	24,296	0	0	0	10,026	0	12,426	1,844
Australian military	10,449	0	0	0	5,733	0	4,716	0
Mutual aid (Non-Empire)	12,000	0	0	0	8,000	0	4,000	0
U.K. civil	5,170	0	0	0	4,760	0	410	0
Canadian civil	9,072	0	147	0	7,665	0	1,260	0

a/ As of May 8, 1944. Including all types of wheeled and half-track vehicles, armored and unarmored except integral busses and off-the-highway trucks. In 1944, 6,960 integral busses (light-heavy type) are scheduled in the U.S., some of which are for Canada; 1,629 off-the-highway trucks, all of the heavy-heavy type, are scheduled in the U.S., and a small additional number are scheduled in Canada.
b/ U.K., Canada, Australia, and other Empire.
c/ Military vehicles for the U.K., Canada, Australia, and other Empire, including Canadian purchases in the U.S. sponsored by the War Department.
d/ Civil vehicles purchased by Canada and allocated by F.E.A. to other Empire countries; there are no U.S. Civil vehicles allocated to the U.K.
f/ Canadian Army Overseas and Home Defense (including R.C.N. and R.C.A.F.).

ules. An extensive program of plant expansion has been in progress in the U.S. automotive field since the early fall of 1943. Sixteen major facilities expansions, totalling $23,000,000 have been made directly in connection with the 1944 truck program among vehicle and component manufacturers. In addition, there are some 200 facility expansions in related lines that will aid the truck program, involving a total of $47,000,000. Completion of substantially all these expansion programs was achieved by July 1, 1944.

In the U.S. great difficulty is now being experienced in the foundries and forges, the products of which enter into so many automotive components, such as axles, transmissions, housings, and carburetors. The foundries and forges have ample facilities to produce the required items, but they lack the manpower. It is estimated now that there is a shortage of 20,000 men in forges and foundries, mainly unskilled laborers. Strenuous efforts are being made by the responsible government agencies to correct this situation, but there is no

TABLE 14.—THE U.S. TRUCK PROGRAM, 1944a/
(Unit - Each)

CLASS OF TRUCK	Actual Production		Quarterly Rate in Last Half
	1st Quarter	2nd Quarter	
Total military and civilian b/	182,014	185,501	220,124
Heavy-heavy and medium-heavy	13,639	18,366	24,603
Light-heavy	64,586	60,512	82,051
Medium	38,903	47,885	50,394
Light b/	64,886	58,738	62,876

a/ As of July 15, 1944.
b/ Military trucks only in the light category.

room for optimism. At the present moment the unpleasant prospect must be faced that heavy truck production in 1944 may fall short by at least 20 percent of the program, and the same shortage may develop in the entire truck program.

Vigorous action is being taken to forestall this possibility. On June 19, 1944, the WPB issued instructions authorizing the "special directive treatment," applicable to the landing craft and heavy artillery programs, to be applied to the heavy truck program, i.e., 2½ tons and over, including truck tractors and the amphibious DUKW's.

Production programs call for sharp acceleration of output in the balance of 1944. Programmed output for the second half of the year for military heavy-heavy and medium-heavy trucks is 66 percent above the level attained in April and May. For light-heavy trucks a step-up of 38 percent is called for. Somewhat smaller increases are programmed in other types.

U.K. Production

U.K. production of motor vehicles, including those of the heaviest types, was well up to schedule in the first six months of 1944. As in the U.S., schedules for military vehicles of the heaviest types rise sharply during the remainder of 1944, while production of similar vehicles for civilian use is to remain about constant. The extent of the increase in military schedules can be gauged from the fact that 50 percent more heavy-heavy and medium-heavy vehicles are to be produced in the last six months than in the first half of the year. (See Table 15). There is reason to expect, however, that the program will be substantially achieved.

Canadian Production

The bulk of Canadian production is of 3-ton (light-heavy) and 15-cwt. (light) types. Deliveries fell behind schedule in April and May for a variety of reasons, including a strike at Windsor. Even so, nearly 40 percent of the year's program for these vehicles was completed by the end of May, and if supplies of components from the U.S. continue to be satisfactory, there should be no significant deficit in the year.

Replacement Parts

Following a resolution by the Truck Committee, later approved by the C.P.R.B., the WPB established a ceiling of $42,000,000 for exports from the U.S. of replacement parts and batteries for essential non-standard vehicles in the United Nations in 1944. In addition, Canadian manufacturers are permitted to export in 1944 up to 100 percent of the dollar volume of exports to the same person or corporation in 1941. This export policy means, that while there is no guarantee that the total export quota will be obtainable, the United Nations will share in North American production of parts for essential vehicles.

TABLE 15.—THE U.K. PROGRAM FOR HEAVY-HEAVY AND MEDIUM-HEAVY TRUCKS, 1944
(Unit - Each)

CLASS OF TRUCK	1944 Program, as of May 8		
	Total for Year	Production in First 6 Months	
		Number	Percent of Program for Year
Total heavy-heavy	3,224	1,292	40%
Military	3,001	1,171	39
Civil	223	121	54
Total medium-heavy	4,100	1,840	45%
Military	2,114	851	40
Civil	1,986	989	50

PUBLIC UTILITIES EQUIPMENT

(PUBLIC UTILITIES COMMITTEE—FORMED JANUARY 1944)

The problem of the Public Utilities Committee in the months preceding the invasion was to anticipate the demands for utility equipment in liberated areas. The volume of these estimated requirements indicates the desirability of creating stockpiles of equipment for electric, gas, and water services, as well as the necessity for some advance procurement—without waiting for procurement agency programs—in the case of equipment having a long manufacturing cycle. Except where manufacturing cycles exceed three months, however, the availability of equipment to meet utility relief requirements is not expected to present serious difficulties. This conclusion follows from the following observations:

1. Utility equipment manufacturing capacity has increased during the war to meet the needs of military and civilian programs and can be used to meet rehabilitation demands which are not expected to be substantial until direct war requirements decline;

2. Even the most effective demolition of utility installations and lines leaves much usable material in place, ready for improvised repairs;

3. Emergency repair materials should be available from utilities in the U.S., the U.K., and Canada, and from manufacturers' stocks.

The Military Period

Extensive stockpiles of all types of utility equipment are held by the armed forces of the member countries. The extent to which these can be made available to meet strictly relief requirements, as opposed to military demands, cannot be anticipated with any accuracy. The military authorities have not yet presented their requirements for public utility stores for the period of military responsibility for relief and rehabilitation, but they have indicated in a preliminary way that requirements for electric generating equipment in the Italian and European theaters (without segregation between strictly military and civil affairs requirements) will include two floating power plants of approximately 25,000 kilowatts each and about 150,000 kilowatts of small portable diesel and steam generating units. One floater (25,000 kilowatts at 50 cycles) is now almost completed in the U.S. Another of the same type is also to be acquired in the U.S. Table 16 indicates the procurement status of the other equipment mentioned above.

Table 16.—PROCUREMENT STATUS OF SMALL PORTABLE DIESEL AND STEAM EQUIPMENT

PROCUREMENT STATUS AND SOURCE	Number of Kilowatts
Total	149,600
On hand	38,600
In the United States	22,000
In the United Kingdom	16,600
On Order	
In the United States	6,000 a/
Authorized for procurement	
In the United States	105,000 b/

a/ Including 3,000 kilowatts diverted from Russian programs without delaying them.

b/ To be obtained from existing equipment as far as possible, and ranging from 100 to 1,000 kilowatts in size, with most of the equipment in the smaller sizes.

In addition to these military stockpiles, and in advance of any further agreed requirements, the British with the concurrence of the Committee, have agreed to proceed with the production of power, gas, water, and communications equipment to the limit of available manufacturing capacity in the U.K., as follows:

Power.—75,000 K.W. of transportable steam power stations, consisting of fifty 500 K.W. stations and twenty 2,500 K.W. stations, to be delivered beginning in the spring of 1945.

Gas.—20 carburetted water gas plants, each of 1 million cu. ft. per day capacity, 7 C.W.G. plants each of ½ million cu. ft. per day capacity, reverberatory furnaces, producer gas plants, boosters, gas mains and fittings, jointing materials, furnace repair materials, etc., to be delivered by the end of 1944.

Water.—Water supply pumping units of miscellaneous types and sizes (all including electric motors for prime mover), water mains and fittings, erection equipment and plumbers' tools, miscellaneous sewage pumps (including electric motors), to be delivered by the end of 1944.

Communications.—Proposals are not yet formulated, but the intention is to produce certain equipment required for relief when it is not likely to be available in military stockpiles.

Canada, with the concurrence of the Committee, has agreed to proceed with the production of equipment as follows:

Power.—15,000 K.W. of transportable power stations consisting of twenty 500 K.W. steam stations and eighteen diesel stations of from 160 K.W. to 450 K.W. capacity each, to be delivered beginning in February 1945 and ending in August 1945.

So far as the programs outlined above will for the present absorb all available U.K. and probably all available Canadian manufacturing capacity, additional demands for relief will necessarily fall mainly on the U.S.

The Civilian Period

Formal programs from procurement agencies have been slow in developing and the Public Utilities Committee has not yet received a statement of requirements from any source, although unofficial conversations have been held with representatives of the French, Belgian, Dutch, and Norwegian national agencies. No UNRRA program has been presented. This lag in the development of utility equipment programs is to be expected since requirements will be dependent almost entirely upon the extent of demolition by the enemy. The Public Utilities Committee has itself conducted a number of studies to gauge probable requirements. In the light of such surveys it is satisfied that any additional procurement of electric generating units must be initiated at the earliest possible moment if the equipment is to be available when needed.

Engineering Organization for Utility Rehabilitation

The Committee has taken the view that responsibility for public utility relief cannot be discharged merely by the provision of stockpiles of equipment, and careful consideration has been given to the question of the organization which will be necessary to undertake the immense task of repair and rehabilitation of damaged utilities as reoccupation proceeds. Demands for the services of skilled personnel, as well as demands for repair and reconstruction materials, may arise immediately and it is believed that it will be of the utmost benefit to the military authorities, to the liberated countries, and to UNRRA, if they are in a position to call on an existing civilian organization, familiar with central station and other utility operations, to handle the task of restoring specific installations.

Exploratory discussions on this subject have taken place in Washington and London, and it has been agreed that a nucleus engineering organization should be set up in London. A U.S. mission is at present organizing this body in London with the British and Canadian representatives.

TRANSPORTATION EQUIPMENT

(TRANSPORTATION EQUIPMENT COMMITTEE—FORMED JUNE 1944)

Because of the prospect of extensive requirements for railroad equipment, port and cargo handling equipment, and road and canal repair facilities, particularly those involved in the rehabilitation of to-be-liberated areas, combined consideration of production and requirements for these items has become urgent. The Transportation Equipment Committee recently established has already reviewed present combined 1945 production schedules for locomotives. It is in the course of preparing combined balance sheets of supply and requirements for locomotives and freight cars.

As yet, a program of relief requirements for locomotives has not been re-

ceived from either the military authorties or UNRRA. Therefore, no specific provision has been made for relief needs in the 1945 locomotive production program. On condition that military needs will not be interfered with, however, the Committee, at its first meeting, indicated its approval of plans for the production of 150 locomotives in the U.K. suitable for use in Europe after the military relief period.

While the Transportation Equipment Committee has been mainly concerned with locomotives to date, it is expected that, in the future, it will recommend sources of supply for other types of transportation equipment, including port and cargo handling equipment. In particular, the Committee will be faced with serious problems in providing equipment for the European transportation system. The experience gained in the operation of the transportation systems of the U.K., the U.S., and Canada under wartime restrictions will undoubtedly provide valuable guidance for the rehabilitation of European transportation.

The Committee has also concerned itself with the transportation requirements of India. Canada, with the approval of the Committee, has agreed to defer certain domestic requirements and to provide 100 additional locomotives besides those already scheduled for 1944 and 1945, and 8,000 freight cars for India in 1945. Additional outstanding Indian requirements for 1945 amount to 218 locomotives and 16,000 freight cars, but the U.S. has agreed to schedule 160 locomotives out of its 1945 production schedule for India. The Committee is continuing to make a detailed examination of Indian requirements. Information has been requested from the Indian Government as to the possibility of achieving better utilization of rolling-stock on the Indian transportation system. The extreme urgency of the requirement in India suggests the desirability of having the new rolling-stock on hand by June 1945. The Committee is therefore having production schedules reviewed with a view to seeing how far this timing can be met.

MACHINE TOOLS

(MACHINE TOOLS COMMITTEE—FORMED NOVEMBER 1943)

It had been expected that combined requirements for machine tools would continue to decline throughout 1944. This has not proved to be the case.

In the U.S. new demands for machine tools have developed in the first half of 1944 substantially in excess of previous estimates. The new demands are for munitions purposes and arise largely from the increased programs for heavy artillery, for large caliber ammunition, and for tanks. U.S. production of machine tools had been declining steadily from a peak of 132 million dollars in December 1942, to an average monthly level of 50 million dollars in the first quarter of 1944, and then to 42 million dollars in April and May of 1944. This fall in production reflected the decline in orders placed, and the steady decrease in unfilled orders. In April 1944, however, there was a change, and new orders exceeded shipments for the first time since August 1942. If the war in Europe continues the remainder of the year the military and export demands for machine tools will be in the neighborhood of 650 million dollars for 1944, while production may be less than 485 million dollars. It may be possible to fill the gap by the transfer of idle government-owned tools, and further screening may be necessary.

In the U.S. the major difficulties in increasing the production of machine tools are a result of the shortage of manpower and the large volume of prime and sub-contracts for munitions work which the vast majority of the machine tool builders had undertaken as machine tool orders fell off between the peak in 1942 and the low in April 1944. In this connection, the WPB is endeavoring to arrange the diversion of such muni-

tions contracts from machine tool plants wherever this is possible.

The anticipated aggregate business for 1944 of 650 million dollars indicated above excludes requirements for reconversion to peace-time production. Plans are now under consideration by the WPB for the granting of a system of priorities to cover the placing of such orders where they do not interfere with the war, but no considerable volume of tools for reconversion programs is likely to be produced in 1944.

With the active cooperation of the Machine Tools Committee, a new survey of government-owned idle tools in the U.S. was commenced last April. To date, 13,000 tools have been listed as idle, and it is expected that, as the survey progresses, between 20 and 25 thousand tools will be so listed in the near future. These tools, however, do not become available for transfer until the owning or interested military or civilian agency declares them to be available. The list of tools which have been declared available for transfer (that is to say, those which have been declared surplus by the owning or interested agency) aggregated 6,500 as of the middle of June.

In the U.K., production of most standard types of machines is sufficient for present requirements. The U.K. has been, however, and will continue to be, dependent upon the U.S. for certain tools. Demands for machine tools in the U.K. are, as far as possible, filled from a pool of surplus machines administered by the Machine Tool Control. The pool is at present composed of some 20 thousand units, with intake and outgo in approximate balance at about 2,000 units per month.

Canadian requirements from both the United States and Canadian builders have continued at the reduced level reached in the latter half of 1943. This has enabled Canadian builders to supply an expanding flow of machine tools to Russia since the beginning of the year. Canada is also currently helping to relieve pressure on U.S. builders by making specialized equipment for the U.S. heavy ammunition program.

The Machine Tools Committee will probably be asked to advise on the orderly disposal of the machine tool surplus which will develop in the U.S., the U.K., and Canada as war production declines. Preliminary work on this question has been in hand for some months past. It is clearly important that a body of consolidated data on the world machine tool position should be at hand to guide the decisions which must be made in the future.

CHAPTER VI

OTHER CRITICAL COMMODITIES

World shortages of various materials and of their products have continued to require the attention of C.P.R.B. and combined C.P.R.B.-C.R.M.B. commodity committees.

In the apparel field, the attention of the C.P.R.B. in the first half of 1944 has been devoted primarily to the distribution of short supplies of hides, leather, and footwear, and of textiles among consuming nations, and to making adequate provision for supplying the immediate needs of liberated areas. In textiles, the shortage of cotton broad woven fabrics has necessitated detailed combined planning of exports and close cooperation with non-member exporting countries. Allocations of hides have been made in accordance with an agreement which became effective in November 1943.

The world deficit of coal as well as of pulp and paper products is attributable in large part to manpower shortages in the producing countries combined with heavy wartime demands. So far as coal is concerned, the C.P.R.B. has been active in promoting the mechanization of mines in both the U.K. and South Africa. The maintenance of U.K. output is of special importance; because of economy in shipping, every effort will be made to fill the relief requirements of Northwestern Europe for coal from the U.K.

With few exceptions, available medical supplies are sufficient to meet all estimated future requirements. The C.P.R.B. Medical Supplies Committee has in recent months been mainly concerned with designating the sources of such supplies for the relief and rehabilitation of the liberated peoples of Europe.

In the field of metals international allocation arrangements have continued. The copper and steel situation deteriorated during the first half of 1944. While the critical shortage of steel is currently confined to flat rolled products, structural shapes and rails, there are indications that an actual shortage of ingots may be encountered before the end of 1944. Earlier forecasts of substantial copper surplus in 1944 have been revised, largely because of declining U.S. output. In the case of aluminum and magnesium, the situation has become easy enough to permit substantial decreases in production and some relaxation of controls.

COAL

(COMBINED COAL COMMITTEE [WASHINGTON]—FORMED AUGUST 1943—JOINT WITH C.R.M.B.)
(COMBINED COAL COMMITTEE [LONDON]—FORMED AUGUST 1943—C.P.R.B.)

During the past six months the prospective United Nations coal deficit for the 1944-1945 coal year, taking into account export requirements, has been reduced from 23.9 million long tons to 10.6 million. The chief factor in this prospective reduction of the deficit was the decrease in estimated requirements of European countries by 15 million tons. These European requirements, however, are highly tentative in view of the many unknown factors and are subject to very substantial revisions in either direction as military operations progress and the European coal situation clarifies. The coal position of the United Nations (not including U.S.S.R.) is set forth in Table 17.

The coal outlook, from a transportation viewpoint, has been improved also in that the deficit is more favorably distributed. North America as a whole is still a deficit area, but U.S. production estimates have been raised and inland consumption estimates lowered, so that the U.S. exportable surplus has been increased from 12.3 to 18.4 million tons, thus cutting the deficit for North America in half and bringing it down to

TABLE 17.—UNITED NATIONS ESTIMATED IMPORT REQUIREMENTS AND EXPORTABLE SURPLUS FOR COAL YEAR ENDING APRIL 30, 1945
(Unit - Million Long Tons)

COUNTRY	Estimated as of Dec. 31, 1943	Revised as of June 1944 a/
Total net import requirements a/	56.2	42.4
Canada	24.1	23.8
Newfoundland	0.8	0.6
South and Central America	1.8	2.0
Iceland	0.0	0.1
Northwest Europe	16.6	7.0
Southern Europe	7.4	2.0
Eire	1.0	1.0
North Africa	0.7	1.2
Middle East and East Africa	2.0	2.0
West Africa	0.4	0.4
Ceylon	0.4	0.4
Bunker Depots	1.0	1.0
British Admiralty	0.0	0.9
Total exportable surplus	32.3	31.8
United States b/	12.3	18.4
United Kingdom b/	14.8	8.5 c/
South Africa	4.2	4.2
British India	0.7	0.7
Rhodesia	0.1	
Nigeria	0.2	
Deficit	23.9	10.6

a/ Estimates for Northwest Europe, Italy, Sicily, the Balkans, and North Africa are for the year ending March 31, 1945. b/ U.S. and U.K. exportable surpluses do not include bunker fuel which is regarded as a part of "inland requirements".
c/ Including 2.3 million tons withdrawal from stocks.

6.0 million tons. The U.S. estimates for 1944-1945 in this report are the most recent estimates of the Solid Fuels Administration for War. They have not yet been submitted officially to the Combined Coal Committee.

Due largely to a reduction in forecast production in the U.K., however, the estimated 1944 exportable surplus of all exporting countries has shown little change since the first of the year. It now stands at 31.8 instead of 32.3 million tons.

Net import requirements of importing countries, including operational supplies and supplies for liberated areas, are currently estimated at 42.4 million tons. The preliminary estimates for liberated areas presented in the December 31 report have been replaced by combined military estimates of essential military and civilian requirements for Northwest Europe, Italy and Sicily, the Balkans, and North Africa for the twelve-month period beginning April 1, 1944. No coal requirements have been received from UNRRA.

Requirements for Northwest and Southern Europe are subject to many uncertainties, such as progress of military operations, degree of scorching, time required to organize continental European coal production, capacity of the ports of entry to handle coal, and internal transport conditions. In view of the uncertainties, the military authorities have been asked to reconsider operational and relief requirements on October 1, 1944, so that the Coal Committee recommendations might be reviewed in the light of additional supply and requirement information.

The Exportable Surplus of the U.S. and the U.K.

In the United States, consumption and exports toteling 607.3 million tons for the coal year 1943-1944 were 2.5 million tons greater and production was 0.4 million tons less than estimated at the end of 1943. Stock withdrawals were 8.8 million tons greater than had been forecast, leaving reported stocks as of April 30 at 45.1 million tons, or 4.0 million tons below what were regarded as safe minimum levels. However, reported stocks do not include coal in transit. There were apparently some 5 million tons more coal in transit at the end of the coal year than at the beginning.

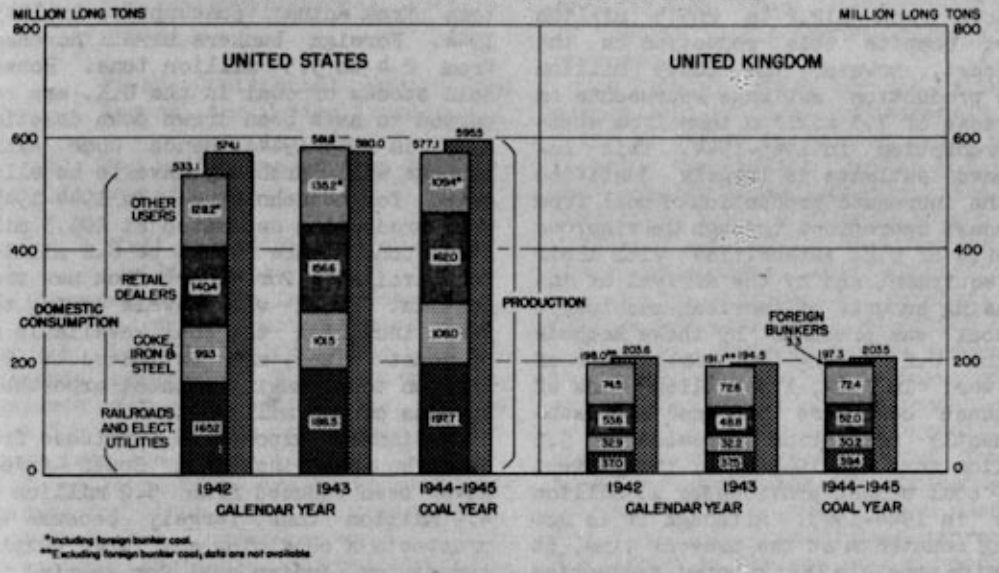
Forecast U.S. production for 1944-1945 has been increased from 590.6 million tons to 595.5 million tons since the first of the year, as is shown in Chart 9.

The present forecast of U.S. production for 1944-1945 represents an increase of 7 million tons from production of 588.3 million tons in 1943-1944. It is expected that this increase will occur despite the continued loss of manpower. Employment in the mines is currently running from 30 to 35 thousand workers less than a year ago, representing almost a 10 percent loss.

This moderate improvement in coal production in face of the continued loss of manpower was caused in part by the fact that the usual seasonal losses during the spring of 1944 did not materialize, due largely to the action of the Solid

CHART 9

COAL PRODUCTION AND CONSUMPTION
IN THE U.S. AND U.K.
CALENDAR YEARS 1942 AND 1943 - COAL YEAR 1944-1944



*Including foreign bunker coal.
**Excluding foreign bunker coal, data are not available

Fuels Administration for War in encouraging regular equal monthly shipments by producers and wholesalers. Stabilization of labor relations and the longer work day established by the agreement in November 1943 also have contributed toward maintaining production at a high level.

For this coal year, industrial requirements estimates have been increased slightly, but requirements for space heating have been cut 8.9 million tons. The Solid Fuels Administration had issued a regulation with the object of curtailing space heating consumption of anthracite and is now contemplating the extension of this measure to bituminous coal in order to effect the above savings. The above changes have caused an upward revision in the estimated exportable surplus from 12.3 million tons to 18.4 million tons. The stock position is not likely to allow any addition to this estimate.

In the United Kingdom, production during the coal year 1943-1944 amounted to 196.1 million tons, 1.9 million tons below forecast, owing to losses on account of strikes in the South Wales and Yorkshire coal fields and the inability to realize the full rate of increase of manpower planned by the War Cabinet. Distributed stocks at the end of the coal year amounted to 12.7 million tons, 0.1 million above the estimate. It is important to bear in mind, however, that the size of the stock is entirely due to emergency activities by the Ministry of Fuel and Power, which cut down deliveries of domestic house coal and exports in order to build up reserves for European requirements and to preserve an essential working stock for industry. In addition to distributed stocks, there

were about 3 million tons of opencast coal accumulated at sites in central dumps.

Partly because of the delays in the receipt and installation of U.S. strip-mining machinery and partly because of the labor situation, the forecast of U.K. production for 1944-1945 has been reduced from 212.2 to 203.5 million tons. Despite this reduction in the forecast, however, the 203.5 million tons production estimate represents an increase of 7.5 million tons from actual production in 1943-1944. This increased estimate is largely justified by the increased production of coal from opencast operations through the vigorous efforts of U.K. authorities with their own equipment and by the arrival of increasing amounts of American machinery. No coal was produced by these methods in the U.K. during the early years of the war. In 1942, 1.3 million tons of opencast coal were produced and subsequently production increased to 5.5 million tons in 1943-1944; the present U.K. coal budget provides for 10 million tons in 1944-1945. Although it is not being counted on at the present time, it is quite possible that opencast production will exceed this figure. In the present favorable season of the year opencast production is running at the annual rate of 11 million tons.

The principal factors in decreasing the forecast for the estimated exportable surplus of the U.K. for the coal year 1944-1945 are the discrepancy between targets and actual U.S. exports of strip-mining machinery, and a reduction in forecast deepmine output on account of the delay in increasing the labor force.

At the end of 1943 an expansion in the British coal mining labor force from 700,000 to 720,000 by June 30, 1944 was authorized. The manpower situation has not permitted this rate of expansion. The labor force was 705,000 on May 1, and it is believed that measures in force will enable an average level of 715,000 men in the coal year 1944-1945 to be achieved. Partly as a result of this increased manpower, and partly as a result of the installation of more modern deepmine machinery, the amount of coal produced in the underground mines is expected to be 3 million tons greater during 1944-1945 than in 1943-1944.

U.K. inland requirements, excluding foreign bunkers, are estimated at 194.0 million tons, an increase of 2.7 million tons from actual consumption in 1943-1944. Foreign bunkers have increased from 2.4 to 3.3 million tons. Household stocks of coal in the U.K. are reported to have been drawn down drastically in 1943-1944; hence some extra tonnage will probably have to be allocated for household use in 1944-1945. With production estimated at 203.5 million tons, there would be 6.2 million tons available for export from new production. Stock withdrawals during the year, including the coal available at opencast sites, are estimated at 2.3 million tons, making a total exportable surplus of 8.5 million tons.

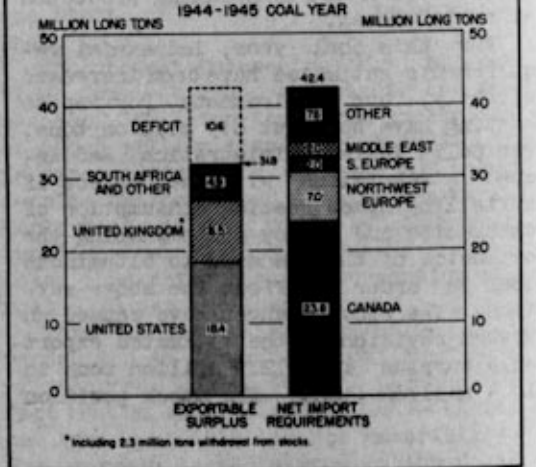
Estimated exportable surpluses from other sources, including South Africa, have been reduced from 5.2 million to 4.9 million tons, largely because the prospects of obtaining any large surplus tonnage of Indian coal for meeting the requirements of the Mediterranean area and the Middle East are not encouraging.

SECRET

CHART 10

EXPORTABLE COAL SURPLUS AND IMPORT REQUIREMENTS

1944-1945 COAL YEAR



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The International Deficit

Chiefly in order to economize on ocean shipping, the Coal Committee has recommended that the preferred sources of supply for coal importing countries shall be as follows:

(a) For Northwest European requirements:

First, Continental Europe, and
Second, the United Kingdom;

(b) For Mediterranean Area requirements:

First, Sardinia and/or Continental Europe,
Second, the Indian Ocean Area,
Third, the United States

The U.K. is obviously the most desirable source of supply on shipping grounds for Northwest Europe. Out of the 8.5 million tons available for export from the United Kingdom, however, 3.5 million tons are at present earmarked for other areas, including Eire, and there are, therefore, only 5.0 million tons available for Northwest Europe, i.e., some 2.0 million tons less than requirements.

In connection with the deficit in Northwest Europe the Committee has concentrated its efforts on availability of U.K. exports. It has continued to stress the importance of making available underground mining machinery from the U.S. for the mechanization program as rapidly as it can be installed and manned. Even more important to the quick increase in coal production in the U.K. is the provision of U.S. strip-mining machinery. Shipment of this machinery has been slower than anticipated, but the program is now well under way, and as a result, substantial amounts of coal will be available this year.

The equipment was originally scheduled for delivery during the first quarter of 1944. It had been recognized that this schedule would be difficult to meet because the types of equipment needed for coal strip-mining are required also for various purposes in the U.K., the U.S., and India, both by the military services and for essential civilian uses. In conformity with the Committee's recommendations, the responsible U.S. agencies have made great efforts to provide the scheduled equipment for the U.K. coal mines. The quantity of machinery exported has been several times any previously recorded volume of exports of such equipment for all purposes.

In June a review of this situation seemed called for. Consequently, in order to advise and assist in the effort to bring production in the U.K. up to the maximum level possible, the Coal Committee sent a mission to the U.K., made up of coal mining managers and engineers, economists, and statisticians. The mission studied the physical conditions and methods of operation of the U.K. mines, reported on the progress of the underground and strip-mining machinery program and made recommendations as to the need for equipment in addition to that already supplied, and for U.S. technical assistance in employing U.S. equipment. Arrangements have been made for training British mine foremen in U.S. mines in the use of U.S. machinery. In addition, the methods of controlling distribution and cut-backs in the U.K. were studied and evaluated as to their possible application in the U.S.

Prospective Indian exports have recently been reduced from 57,000 to 30,000 tons per month. The Committee has favored the expansion of the output of coal in India through a large strip-mining program designed to yield as much as 6 million tons per annum. The government of India and U.S. companies are considering contracts for this project, which, as now contemplated, could be handled without serious competition with the U.S. or U.K. strip-mining programs. Although the bulk of any increased production would have to be absorbed in meeting India's own rising requirements, due to military operations and production and transportation of military supplies, there is some reason for believing exports could also be expanded.

The Committee has constantly been aware of the need to increase coal exports from South Africa, on account of

its strategic position as a source of supply for the Middle East, the Mediterranean area, and South America, and has supported to the maximum the provision of U.S., U.K., and Canadian equipment for the South African mines and railways. An order for 2,500 bogie wagons has been placed in Canada and almost 900 of these were placed in service in South Africa between August 1943 and the end of the year. These, combined with the delivery of locomotives and mining machinery from the U.S. and U.K. have enabled South Africa to increase its exports of coal very substantially. Forty-three coal cutters and spares have been requested from the U.K. and the U.S. for delivery during 1944 and it is hoped that all of them can be supplied. South African railway and mine authorities have estimated that exports can be further increased to, and maintained at the rate of 400,000 long tons a month in 1945 if deliveries of equipment are made according to schedule.

TEXTILES

(COMBINED TEXTILE COMMITTEE—FORMED JANUARY 1944)

When it began its work in January 1944, the Textile Committee was faced with an extremely critical situation in cotton textiles. Production was showing evidence of decline in the major areas on which the United Nations were dependent, namely, the U.S., India, and the U.K. At the same time requirements were increasing. Military requirements were rising, and civilian supplies of many importing nations were becoming very short as stocks accumulated from Axis sources or elsewhere (before the supplies were curtailed) were exhausted.

The first balance sheet for cotton broad woven goods, dated January 15, revealed that total annual requirements of the United Nations were in the neighborhood of 23.2 billion yards compared with an estimated production of 21.6, indicating a deficit of 1.6 billion yards. Additional unprogrammed requirements of occupied Europe and of China and Russia appeared likely to push the deficit up to about 2 billion yards.

Since that time, both requirements and estimated supply have decreased. Supply is now estimated at 20.9 billion square yards, and requirements, not including those for relief and rehabilitation, now total 20.7 billion square yards.

The Committee has given a major portion of its attention so far to cotton broad woven goods. The chief reason for this emphasis on cotton lies in its overshadowing importance among the civilian textile needs of the United Nations. Whereas a total of about 2.5 billion yards of cotton will be exported by the U.S., the U.K., India, Brazil, and Mexico in 1944, combined exports of rayon will amount to less than 150 million yards, and of wool textiles to less than 75 million yards.

Brazilian and Mexican Cooperation

It was recognized when the Committee began its work that the cooperation of all important supplying countries among the United Nations was required for successful combined planning. This fact was clearly evident from the 1943 exports of cotton goods. The U.S. led with 704 million square yards, followed by India with 551 million yards, and U.K. with 405 million yards. Brazil exported about 300 million yards and Mexico about 85 million yards.

As a result of invitations dispatched at the Committee's request through appropriate diplomatic channels, textile missions from both Brazil and Mexico have visited Washington and discussed the planning of cotton textile exports with the Textile Committee. Arrangements were worked out with the Mexican representatives for an interchange of information between the C.P.R.B. and the Mexican government concerning both export plans and actual exports. The Mexican representatives also were informed of the world need for textiles and indicated a desire to cooperate through an expansion of Mexican exports.

The Brazilian Mission advanced a proposal to increase the cotton textile exports of Brazil from 300 to 500 million yards per year. A plan of distributing these exports by countries was worked

out between the Mission and the Textile Committee subject to the approval of the Brazilian government. Agreement was also reached on the interchange of export and production statistics.

Combined Export Program for Cotton Goods

The Committee, in cooperation with the appropriate national agencies in each country, has now developed and issued two combined export programs for cotton broad woven goods—one for the first half of 1944, and the other for the second half of the year. Tables 18 and 19 summarize 1944 export programs by source and by destination.

There are two ways of meeting world shortages in a commodity like textiles, and both must be used: one is to increase output, and the other is to find the most satisfactory method of living within the short supply. The combined export program is a major step in the latter direction.

The need for maintaining or increasing production presents a more difficult problem on a combined basis. One informal step to its solution has been the visit of a British Textile Mission to the U.S. early in the spring. The Mission came to study U.S. cotton mill operations, particularly with reference to U.S. work assignments. Since output per operative usually is higher in the U.S. than in the U.K. it was thought the Mission might be able to determine how U.K. technique could be revised in the interests of greater output.

Table 18.—ESTIMATED PRODUCTION OF COTTON BROAD WOVEN GOODS IN 1944, FOR EXPORTING COUNTRIES, AS OF JUNE 30, 1944
(Unit - Million Square Yards)

COUNTRY	Estimated Total Production	Net Indicated Supplies for Domestic Non-military Use	Military Allotments	Estimated Net Supplies Available for Export Allocation
Net total	20,859 a/	-	-	2,371 b/
Gross total	21,103	15,045	3,556	2,502
United States	10,550	7,389	2,234	927 c/
United Kingdom	1,885	792	577	516
India	6,000 d/	4,840	600	560
Canada	555 f/	485	45	25
Brazil	1,375	900	100	375
Mexico	573	476	*	97
Colombia	165	163	*	2

a/ Including an adjustment for Canadian imports estimated at 244 million yards.

b/ Including an adjustment for total net supplies available for export allocation from Brazil, Mexico, and Colombia, which together exceed the amount so far programmed for export by 131 million yards.

c/ Based on the assumption that U.S. allocations for the fourth quarter will be maintained at levels recommended by the C.P.R.B. rather than at the rate of actual third quarter allocation. Tentative level of C.P.R.B.-recommended fourth quarter exports from the U.S. assumes that any cutback effected in third quarter allocations compared with C.P.R.B.-recommended exports will be made up in the fourth quarter.

d/ Excluding undeterminable hand loom output, which can bring domestic use to 5 billion square yards and the total production in excess of 6 billion.

f/ Including 311 million square yards produced domestically and 244 million yards imported.

* Not available; presumably included with domestic nonmilitary use.

Table 19.—ESTIMATED ALLOCATIONS OF COTTON BROAD WOVEN GOODS EXPORTS IN 1944, AS OF JUNE 30, 1944
(Unit - Million Square Yards)

COUNTRY	Allocation
Total net supplies available for allocations	2,371
Allocations	2,187
South, Central, and North America (incl. Canada), Caribbean Area, and Iceland	660
British countries in the Western Pacific	264
Other British and adjacent countries (incl. Eire) in Eastern Hemisphere	930
Remainder of Africa, and French possessions in the Pacific	283
Neutrals	37
All other	13
Indicated supply available for liberated areas	184

Recommendations For Supplying Liberated Areas

Requests for textiles for relief and rehabilitation purposes have been considered by the Committee for both the military and post-military periods. For the military period in Western Europe allocations equalling the requests were made of cotton broad woven goods, wool woven goods, knit goods and findings. The responsibility for supply was shared by the U.S. and the U.K. according to ratios representing their respective export availabilities.

Because of extremely tight supply conditions only interim recommendations have been made against the requests sponsored by UNRRA for the post-military period. These have included: (1) endorsement of a Canadian proposal to supply wool garments, equivalent in cloth to 2.25 million yards; (2) approval of

a tentative Brazilian offer to supply up to 90 million yards of cotton goods; (3) acceptance of a U.S. proposal to make 300 million yards of cotton goods available on a "contingent" basis, under which all steps necessary for procurement would be taken up to the point of placing actual orders, this last step to be taken after authorization by the WPB Textile Requirements Committee. The merit of this procedure lies in the saving of time when supply eases because of military cut-backs or for other reasons.

Future Work of the Committee

The Committee should consider new problems at this time, as well as continue in its present activities. Export programming of cotton broad woven goods must be supplemented by the programming of exports of cotton yarn and rayon fabrics. They both augment an importing nation's supply of cotton woven goods. Furthermore, the world rayon supply situation needs review to determine the possibility of making rayon textiles available to the liberated areas. The wool textile supply also merits further study in relation to the needs of the liberated areas.

Associated with the problems of supplying liberated areas are questions of supply of raw materials, of providing textile machinery, and of the use of the facilities of enemy nations. Furthermore, the rehabilitation of liberated areas may raise new problems which would render desirable the development of closer collaboration with other countries.

HIDES, LEATHER, AND FOOTWEAR

(COMBINED FOOTWEAR, HIDES, AND LEATHER COMMITTEE—FORMED AUGUST 1943—JOINT WITH C.R.M.B.)

Hides Agreement

Details of the agreement to apportion available supplies of cattle hides in the ratio of 3.5 to the U.S., 1 to the U.K., and 0.3 to Canada, and calf and kipskins in the ratio of 5.8 to 1 and 0.6 respectively, continue to be the subject of discussion in the Combined Footwear, Leather, and Hides Committee.

The agreed formula for allocation of hides by the C.R.M.B., has been based on the relative volume of hide wettings in 1940 for the U.K. and in 1942 for the U.S. and Canada. The purpose of this basis is to give some assurance that, regardless of the total volume of supplies available, the tanning facilities of each of the three countries will be utilized in approximately the same relative proportions.

Cattle Hides

Although total supplies of cattle hides available to the U.S., the U.K., and Canada during the year 1944 are expected to be in excess of 1943 supplies, and are now estimated to be at a higher level than was envisioned at the start of the year, the leather position of all three countries continues to be critical. At the beginning of the year, supplies of hides for 1944 were estimated at 31 million pieces; in the light of experience, this estimate has now been revised to 32 million pieces, due to expectations of improved domestic supply in the U.S. and Canada.

Table 20.—COMBINED HIDE SUPPLY, 1944
(Unit - Each)

SOURCE OF HIDES	January 1 Estimate	June 1 Estimate
Total	31,000,000	32,000,000
U.S. domestic	19,000,000	22,000,000
U.K. domestic	2,000,000	2,000,000
Canada domestic	1,600,000	1,850,000
Importable	8,400,000	6,150,000

The present estimate of 22 million hides for U.S. domestic supply represents a record high in the history of the country. The reasons for the decrease in foreign hides are not clear, but seem to include an increase in local tanning in Argentina, an increase in imports by other Latin American countries, and possible speculative stock-

piling of hides or leather. The present anticipated total of 6,150,000 pieces compares with actual purchases of the three countries during the first five months of 1944 of 2,640,000 pieces, an annual rate of about 6,300,000 pieces.

The combination of increasing U.S. domestic supplies and decreasing foreign supplies has resulted, because of the formula agreed upon, in a sharp decrease in the monthly percentage allocation of foreign hides to the U.S. and a corresponding increase in the percentage to the U.K. U.S. imports rose sharply, however, in the first quarter of 1944 as a result of the backlog of unshipped allocations. In the year ending June 30, 1944, supplies of hides were distributed in the ratio of 3.541 for the U.S. to 1 for the U.K., as compared with the agreed 3.5 to 1 ratio. Since the middle of 1943 supplies available to the U.S. have increased sharply from a monthly average of 1,486,000 hides in the third quarter of 1943 to a monthly average of 2,139,000 hides in the first quarter of 1944. This is due principally to increased domestic U.S. supplies. Supplies available to the U.K. have remained fairly level, as shown in Table 21.

Wettings of cattle hides during the third and fourth quarters of 1943 for all three countries exceeded total available new supplies, indicative of a continued deterioration in the raw stock position. The reverse was true during the first quarter of 1944. New supplies exceeded wettings in all three countries by about 270,000 hides on a monthly average, indicative of an improvement in the raw stock position.

The improved over-all raw stock position is illustrated in Table 22, which shows the changes in "pipeline" stocks for the three countries from the end of June 1943 to March 31, 1944. The pipeline position of both the U.K. and Canada deteriorated between December 1943 and March 1944.

Table 21.—NEW SUPPLIES OF CATTLE HIDES
(Unit - Monthly Averages in Thousand Pieces)

COUNTRY	1943		1944	
	3rd Quarter	4th Quarter	1st Quarter	Last 9 Mos. (Est.)
Combined Total	2,226	2,679	2,890	2,600
Domestic	1,483	1,969	2,069	1,842
Imports	743	710	821	758
United States	1,486	1,297	2,139	1,850
Domestic	1,198	1,647	1,785	1,543
Imports	288	280	354	307
United Kingdom	362	382	374	272
Domestic	151	174	132	154
Imports	411	408	442	421
Canada	178	170	177	172
Domestic	134	148	152	145
Imports	44	22	25	30

Table 22.—PIPELINE STOCKS OF CATTLE HIDES
(Unit - Thousand Pieces at the End of the Month)

COUNTRY	July 1943	December 1943	March 1944
Combined Total	6,675	7,383	7,997
United States	4,104	4,865 a/	5,421 a/
United Kingdom	1,981	2,531	2,079
Canada	590	487	497

a/ Excluding amount of stocks afloat and purchased but not shipped involved in private contracts entered into prior to the establishment of the Joint Hide Control Office in December 1943.

Calf and Kipskins

Supplies of raw calf and kipskins are divided among the U.S., the U.K., and Canada by agreement in the ratio of 5.8 to 1 to 0.6 respectively. During the twelve months ending June 30, 1944, the actual distribution was as follows:

Table 23.—DISTRIBUTION OF RAW CALF AND KIPSKINS JULY 1, 1943—JUNE 30, 1944
(Unit - Thousand Skins)

SOURCE OF SKIN	Combined Total	United States	United Kingdom	Canada
Total	18,490	14,627	2,434	1,429
Domestic	14,407	11,814	1,380	1,213
Foreign	4,083	2,813	1,054	216

The actual ratio of distribution was 6.01 to 1 to 0.59.

Shoe Production

In all three countries footwear production in the first quarter of 1944

Table 24.—TOTAL SHOE PRODUCTION
(Unit - Monthly Averages in Thousand Pairs, Including All Types)

COUNTRY AND TYPE OF PRODUCTION	1942 Total	1943		1944
		1st Half	2nd Half	1st Quarter
Combined total	51,999/	50,487	49,353	49,745
Civilian	47,054	44,918	44,795	45,067
Military	4,045	5,569	4,557	4,678
United States	40,182	38,971	37,957	38,531a/
Civilian	36,776	34,902	34,416	34,826a/
Military	3,406	4,069	3,541	3,705a/
United Kingdom	9,035	8,605	8,580	8,348a/
Civilian	7,737	7,472	7,734	7,478a/
Military	1,298	1,133	846	870a/
Canada	2,782	2,911	2,816	2,866
Civilian	2,541	2,544	2,646	2,763 b/
Military	241	367	170	103

a/ Four months' average January—April.
b/ Two months' average January—February.

shows no important change from the 1943 rate.

Table 24 shows comparative shoe production for the three countries.

Import Requirements of Footwear for Non-member Countries

The Committee has made a study of the import requirements during the first half of 1944 of countries which are not members of C.P.R.B. and of the supplies believed to be available to satisfy them. In addition to the requirements of non-producing countries such as Iceland, the requirements consist mainly of leather footwear for Europeans in British, French, and Belgian colonial territories, cheap leather and canvas footwear for native use, and special types, especially children's and infants' shoes, to supplement local production in Latin America and the British Dominions.

The total import requirements of leather shoes in the first six months of 1944 for importing United Nations were established at something less than 3 million pairs. Export allocations were made available to meet them.

Import requirements of non-leather footwear were about 2 million pairs, and only about 1 million pairs were allocated, practically all of these from the U.S. The real difficulty, however, is less in numbers than in types, since it has not been possible to provide sufficient quantities of a shoe cheap enough to take the place of the canvas and leather types formerly imported from Japan and India.

The Committee is at present reviewing the position for the second half of the year. There is no reason to think that the situation has substantially altered.

Liberated Area Requirements

The Committee considered a request from the Combined Civil Affairs Committee, embodying the requirement for 13,146,000 pairs of footwear needed for relief purposes during the military period (the six months following the end of hostilities) in certain European countries. This program was based on the assumption of a collapse of enemy forces in July 1944, and therefore covered the last six months of 1944.

A survey of footwear likely to be available for relief purposes in the U.S., the U.K., and Canada during that period showed that the stated C.C.A.C. requirements could be met, and the Committee so recommended, designating sources of supply as follows:

Combined Total	13,146,000 pairs
United States	10,646,000 "
United Kingdom	2,000,000 "
Canada	600,000 "

Most of these have already been procured.

Relief requirements for footwear and related materials during the civilian period (the twelve months following the military relief period) were submitted by UNRRA on March 31 covering requirements for the first eight months of civilian relief, which would come as a demand on supplies available during the last six months of 1944 and the first six months of 1945.

The UNRRA request embodied three alternatives varying from 19 to 29 million pairs of finished footwear involving a greater or less extensive use of leather substitutes. It included also very

substantial requirements of hides, skins and leather, to be delivered as such, for which substitute material would be acceptable in whole or part.

The program for the civilian period is still being considered by the Committee, which has in the meantime recommended that a total of 13,000,000 pairs of finished footwear be made available during the second half of 1944 against possible additional requirements during the military period and against the submitted UNRRA program. Of these, 12 million pairs would come from the U.S. and 1 million pairs from the U.K.

MEDICAL SUPPLIES

(MEDICAL SUPPLIES COMMITTEE—FORMED NOVEMBER 1943)

With a few notable exceptions, the position of medical supplies is in general satisfactory. Total requirements, including those so far submitted by the C.C.A.C. and UNRRA, are considerably lower than the combined production capacity of the U.S., the U.K., and Canada. There are two major problems still confronting the Committee. The first is to maintain the balance of supply and demand for certain essential drugs still in short supply. The second is to allocate supply responsibility for liberated areas in such a way as to utilize stocks and productive capacity for individual items to the best advantage without disturbing production plans in any country or interfering with the assembly of complete units.

The most important critical items in short supply are: gas gangrene anti-toxin, penicillin, emetine, bismuth, the cinchona alkaloids and salts, and possibly dental burrs. Even for these items the situation has in general eased considerably since the beginning of the year.

Gas Gangrene Anti-toxin

Some revisions in formula have been recommended by a technical working group, set up by the Committee with the assistance of the National Research Council. The U.S. has agreed to supply 500,000 doses of the revised trivalent formula to the U.K. before the end of 1945. This is thought to be sufficient to meet all U.K. military requirements on U.S. production.

Bismuth

Total 1944 requirements of bismuth for pharmaceutical purposes in the U.S. and the U.K., on the basis of restricted civilian consumption, are the same as those presented at the first of the year. As the C.R.M.B. has made an allocation of new bismuth metal for this purpose amounting to 667 thousand pounds and the requirements on the U.S. and the U.K. total 1,162 thousand pounds, it will be necessary to draw heavily on stocks if requirements are to be met. Table 25 outlines the current requirement situation for bismuth to be used for pharmaceuticals.

Table 25.—SUMMARY OF BISMUTH REQUIREMENTS ON THE U.S. AND U.K. FOR PHARMACEUTICALS, 1944
(Unit - Thousand Pounds)

REQUIREMENT	Total	United States	United Kingdom
Total	1,162	752	410
Military	238	200 a/	38 b/
Civilian	924	552	372
Domestic	708	480	228
Export c/	216	72	144

a/ Including U.S.S.R. military requirement of 8,800 pounds.
b/ Including Indian military requirement of 3,500 pounds.
c/ Allocation of export requirements on an importer's choice basis. It was estimated that one-third of the orders would be placed on the U.S. and two-thirds on the U.K. in 1944. The allocation includes 12 thousand pounds for relief.

The Canadian position has changed substantially since the first of the year. As a result of cut-backs in military programs requiring bismuth, Canada, instead of being merely self-sufficient, now has an exportable surplus, 72,000 pounds of which can be processed into pharmaceutical salts and compounds. This quantity is included in the C.R.M.B. allocation of 667,000 pounds. The procedure for Canada's participation in the export program has not yet been formulated, but all three countries have agreed

to a quarterly exchange of information, including export data.

Dental Burrs

Recent action of the WPB Requirements Committee has brought combined requirements for dental burrs (excluding UNRRA requirements of 4.3 million) into approximate balance with estimated 1944 supplies. It is hoped that additional working shifts may increase Palestine's surplus sufficiently to meet part of the UNRRA requirements.

Table 26.—SUPPLY AND REQUIREMENTS OF DENTAL BURRS, 1944
EXCLUDING RELIEF REQUIREMENTS
(Unit - Million Burrs)

ITEM	United States	United Kingdom	Canada	Palestine
Production	48.8	13.0	1.0	3.4
Imports	0.0	0.0	2.0	0.0
Requirements	48.8	15.9	3.0	1.5 b/
Domestic	47.1	9.0	3.0	
Foreign	1.7	6.9 a/	0.0	
Surplus or deficit	0.0	- 2.9	0.0	+1.9 b/

a/ Including between 2.5 and 3.5 million burrs for U.S. Forces in England and 2 million for Canada.
b/ An estimated 1.5 million are needed for Middle East countries and the balance is available for relief or for Western Hemisphere countries.

Emetine and Ipecac

The U.S. negotiations initiated last December with Brazil for the purchase of their exportable surplus of emetine and ipecac, were abandoned in April. The agreement had reached the final stage of approval when several major revisions were proposed by the Brazilian Government. In view of the additional and prolonged delay which would result from reopening negotiations, the U.S. and the U.K. officials concerned agreed that it would be preferable to withdraw from the Public Purchase Program and to return the procurement to private trade channels. This change in the method of procurement was made effective May 5.

A C.P.R.B. decision of May 4 provided that during the first six months of 1944 all ipecac and emetine from Brazil be allocated in equal shares to the U.S. and the U.K., and that all ipecac from Central American sources be made available to the U.S.

Cinchona Alkaloids

It now appears that the quinine supply is adequate to fulfill the combined military requirements, at least through the year 1945. This is attributable to several factors, but chiefly because atabrin, which is now in easy supply, has proved highly satisfactory for the prevention and treatment of malaria in the armed forces, thus resulting in smaller military requirements of quinine and totaquine.

The problem before the Medical Supplies Committee, therefore, is to recommend an equitable distribution of the cinchona bark and derivatives supplied from Latin America, largely to meet the civilian requirements. In February of this year the Committee recommended that 125 tons of cinchona bark from Latin America be allocated monthly to the U.K. This was made an interim decision of the C.P.R.B. pending further information as to the military requirement and supply position.

Penicillin

The Medical Supplies Committee is watching the penicillin position, though technical difficulties make the rate of expansion of production so uncertain that no combined planning is yet possible. After meeting military requirements as now stated, there are some supplies which, under adequate control, can be made available for civilians. In the second half of the year it is likely that these supplies to civilians can be increased, and that small quantities can be made available for limited clinical use in countries other than the U.S., the U.K., and Canada.

Relief Programs

The Medical Supplies Committee, like other committees, has been requested to recommend the source of supply for requirements established by the C.C.A.C.

and UNRRA for the relief of the civilian populations of Europe.

C.C.A.C. Program

The Committee considered an initial C.C.A.C. program based on an "unscorched" hypothesis and recommended that provision for supplying civilian relief requirements during the military period be made in the ratio of two-thirds on the U.S. and one-third on the U.K. This general division of supply responsibility was qualified for several items, particularly those for which the U.K. was in a short supply situation. Taking into consideration these qualifications, the U.S. contribution will be about 70 percent, with the U.K. furnishing the balance. Canada made no direct contribution to this program. A revised C.C.A.C. program covering a "limited scorched" assumption will be submitted shortly involving additional requirements almost equal to those already submitted.

UNRRA Medical Supplies Program

The post-military program is also based on an "unscorched" premise, but the requirements are on a somewhat more generous scale than those in the C.C.A.C. program. The total program is about six times as large as the initial program for the military period. The requirements include sufficient expendables for the care of 75 million persons in the liberated countries for 12 months following military occupation, or for 150 million persons for 6 months. No provision is made for enemy or ex-enemy countries, the U.S.S.R., the Far East, or for "scorching"; however, a sizable reserve has been included which should make it possible to meet the most urgent of such contingencies.

The UNRRA medical program consists in large part of 200 standard units. Each standard unit represents consumable medical supplies for one million people for three months, supplying first aid, hospitals, laboratories, and special units. In addition, an emergency unit, probably the first to go into the field, comprises drugs, dressings, and medical supplies to care for the essential requirements of 100,000 persons during one month. Three thousand of these are included in the program.

In addition to the foregoing there are hospital units and numerous special purpose units, such as sanitation, dental, X-ray, laboratory, epidemic and malarial control, and midwife and confinement supplies.

A recommendation as to the division of supply responsibility for all medical items and predominantly medical units was approved by the C.P.R.B. at the end of June and forwarded to UNRRA. Recommendations on sanitation supplies and other non-medical equipment and supplies should go forward early in August. It is estimated that of the entire program the U.S. will furnish about 84 percent and the U.K. 16 percent. While Canada is unable to supply any complete units, certain of the components of the units will be obtained from Canadian sources.

The Committee has recommended that any surplus military stocks of medical items should, wherever possible, be made available for meeting relief requirements in order that new production may not be initiated unnecessarily in any country. The Committee, however, also suggests that where the production time is long, procurement already initiated should not be cancelled until it is clear that it will not be needed to meet future requirements which have not yet been stated. Actual requirements for both the military and UNRRA periods of responsibility may be considerably larger than anticipated. In this event the Medical Supplies Committee will be responsible for determining the source of supply for such supplementary amounts.

STEEL

(THE COMBINED STEEL COMMITTEE—FORMED DECEMBER 1942—JOINT WITH C.R.M.B.)

The combined steel supply for 1944 is now estimated by the Combined Steel Committee at 107.7 million net tons of ingots and castings, or 77.2 million net tons of finished steel. Table 27 compares estimated production for the last three

TABLE 27.—ESTIMATED AND ACTUAL STEEL PRODUCTION IN 1943 a/ and 1944
(Unit - Million Net Tons)

PERIOD	Ingots & Castings	Finished Steel
1943 - Total	109.0	77.1
First Quarter	27.0	19.1
Second Quarter	27.0	19.3
Third Quarter	27.5	19.0
Fourth Quarter	27.5	19.7
1944 - Total	107.7	77.2
First Quarter	27.6	20.2
Second Quarter	27.7	19.6
Third Quarter	26.2	18.7
Fourth Quarter	26.2	18.7

a/ Changes in actual production figures for the first three quarters of 1943 from those given in the December 31 report result from receipt of more complete data and from correction of errors in the earlier figures.

quarters of 1944 with actual production for the four quarters of 1943 and the first quarter of 1944.

The details of the contributions of each country to the total are shown in Table 28.

The new supply estimates for 1944 are lower than those presented in the last report. This downward revision is attributable principally to two factors: (1) Although the facilities expansion program in the U.S. is now practically completed, the continuing drain of manpower into the armed services is expected to prevent capacity operation; (2) Military demands on inland transport in the U.K. are making it necessary to scale down steel production in order to save haulage, both of raw materials and of finished steel. Since both factors are contingent in such large part on the progress of military operations in Europe, the estimates must be regarded as distinctly tentative.

On the demand side, too, there are important changes from the prospect which obtained at the time of the last report. Allocations to the military programs for the third quarter of 1944 are generally lower than they were at the first quarter peak, as shown in Table 29, but not as low as estimated at the beginning of the year. This table is somewhat misleading since the difference between the first and third quarter allocations to military programs is not a true measure of the change in requirements for munitions producing industries. The figures in Table 29 do not lend themselves to detailed comparison, since they are expressed in dissimilar terms. The principal differences are: (1) The U.K. definition of finished steel differs from that used in the U.S. and Canada. The U.K., for example, counts the weight of forgings, while the U.S. and Canada count the weight of billets and bars for forging; (2) Steel for the manufacture of certain

TABLE 28.— THE COMBINED STEEL SUPPLY, 1943-1944
(Unit - Thousand Net Tons)

ITEM	1943 1st Quarter	1943 2nd Quarter	1943 3rd Quarter	1943 4th Quarter	1944 1st Quarter	1944 2nd Quarter	1944 3rd Quarter	1944 4th Quarter
Total production of ingots & castings a/	26,950	26,964	27,452	27,505	27,684	27,677	26,223	26,223
United States	22,435	22,485	23,185	23,136	23,270	23,458	22,204	22,204
United Kingdom	3,791	3,706	3,531	3,609	3,606	3,400	3,200	3,200
Canada	724	773	736	760	748	819	819	819
Total deliveries of finished steel a/	19,141	19,313	19,047	19,749	20,257	19,591	18,740	18,740
United States	15,955	16,144	16,053	16,667	17,144	16,616	15,900	15,900
United Kingdom	3,338	3,099	2,872	3,061	3,078	3,077	2,908	2,908
From home ingots	2,654	2,594	2,472	2,546	2,524	2,380	2,240	2,240
From imported steel b/	684	505	400	515	554	697	668	668
Canada	*	*	949	874	792	860	903	895
From home ingots	334	373	522	556	569	595	600	600
From imported steel	336	335	340	254	183	205	243	235
Imports of fabricated products	*	*	87	64	40	60	60	60

a/ Actuals through first quarter 1944, estimates thereafter; deliveries exclude imports.
b/ Including withdrawals from stocks.
*/ Not available.

TABLE 29.—FINISHED STEEL ALLOCATIONS
(Unit - Thousand Net Tons)

COUNTRY AND RECIPIENT	1943 4th Quarter	1944 1st Quarter	1944 2nd Quarter	1944 3rd Quarter
United States	19,628	19,717	19,545	18,435
Aircraft Resources Control Office	682	561	455	450
War Department	4,129	4,100	3,745	3,728
Navy Department	2,090	2,380	2,217	2,137
Maritime Commission	2,613	2,677	2,373	1,911
FEA - United Kingdom	780	433	378	321
FEA - All other	859	906	995	726
Canadian Division	457	375	305	358
War Food Administration	696	885	1,017	1,061
Office of Defense Transp.	1,444	1,621	1,596	1,475
FAW & CWU	854	684	898	829
All other a/	5,048	5,093	5,566	5,439
United Kingdom	3,110	3,128	2,960	2,908
Air Min. and M.A.P.	338	323	300	296
War Office & Min. of Supply	1,366	1,364	1,318	1,328
Admiralty	474	466	434	397
Admiralty-Mercantile	224	228	202	185
Board of Trade - direct and indirect export	54	69	48	50
Min. of Agri. & Fisheries and of Food	113	113	110	111
Min. of War Transport	184	184	197	187
Min. of Fuel & Power & Electrical Communication	194	207	184	180
All other	163	174	167	174
Canada	1,097	1,009	847	950
Aircraft	5	3	3	3
Tanks & combat vehicles	55	52	40	38
Mech. transport vehicles	164	149	138	140
Ammunition	98	81	74	139
Armament and weapons	34	34	20	22
Naval vessels	46	40	23	59
Mil. equipment & supplies	72	56	28	15
Cargo vessels	102	94	93	127
Mutual Aid and other direct export	40	76	62	34
Agr. & food processing	93	92	82	90
Transportation	132	129	120	158
Petroleum & utilities	19	13	15	11
All other	197	190	149	112

a/ Mainly for the manufacture of common components. Most of the balance is for maintenance repairs and operating supplies. In second and third quarters of 1944 this figure includes reserve for construction allotted in earlier quarters directly to claimants.

products—called B products in the U.S. —is handled differently in the three countries, its attribution to particular programs being almost complete in Canada, partially so in the U.K. and almost entirely absent in the U.S.; (3) Due to changes in program classification, the flow of steel to certain U.S. and Canadian programs is not uniformly indicated for all quarters; (4) Overallotment of the prospective supply varies widely, being greater in the U.S. than in the U.K. It is practically impossible to reduce to statistical terms the effects of these differences on the detailed figures.

In the U.S., part of the difference between first and third quarter military allocations is attributable to a change in CMP procedure; steel for construction, formerly allotted directly to claimants, is now being "reserved" in the initial allocations and transferred piecemeal to claimants as the quarter progresses. The "reserve" is included in "All Other" in Table 29. Another part of the difference is attributable to the fact that the third quarter allocations include less allowance for "attrition" than did the first quarter allocations.

Third quarter allocations in the U.K. do not adequately depict requirements because they are cut from the level of the first quarter in order to reduce the burden on transport facilities, and consumers are expected to make up their deficiencies by drawing on their stocks. Actual consumption of steel in most of the U.K. munitions production programs is expected to be about equal to or higher than that in the first quarter. In all three countries, certain urgent programs, such as the ammunition programs, which were expected to taper off, have instead been expanded.

Even more significant than the position of steel generally is the stringency which has developed in certain particular forms of steel. Plates and sheets continue to be in especially short supply. Enormously increasing requirements of shell steel billets have caused severe tightening of the position in rails and structural shapes because a considerable portion of the facilities which normally produce the latter products are now directed into production of the former. Difficulty is being experienced in meeting heavy requirements of large-sized pipe, which must be made either by bending and welding plates or by piercing billets rolled on mills now needed for producing shell steel. Finally, the supply of wire rope, important in several key programs, is inadequate to meet current demand even though production has been increased to three times the pre-war output.

U.K. requirements on U.S. production continue to be lower than in 1943, not because of declining total U.K. requirements and rising U.K. production, as was expected at the time of the December 31 report, but principally because port facilities are inadequate to handle more steel than is currently being produced in the U.S. for the U.K. In addition, a considerable tonnage of lend-lease orders for certain forms of steel, such as plates and rails, which are in especially short supply in the U.S., has been transferred to Canadian mills during the first half of the year. A large part of these lend-lease orders is destined for the U.K. Increasing Canadian domestic requirements of ship plates and shell steel billets, however, will sharply curtail the amount of this Canadian production for Mutual Aid after the mid-year.

The declining trend of Canadian requirements on the U.S., noted in the last report, is sharply reversed in the third quarter. Large new orders placed in Canada by the U.K., for landing craft, and by the U.K. and U.S., for artillery shells, and a considerable increase in the requirements of the Canadian cargo vessel program will prevent realization of the surplus steel production capacity which earlier appeared to be in prospect.

Early in 1944, all three countries were contemplating the relaxation of conservation restrictions on the use of steel. With few exceptions these plans have now been shelved. The exceptions are principally relaxations which permit the resubstitution in essential uses of steel for materials such as wood, paper, and glass, which are now in even shorter supply than steel, or which have caused pronounced inefficiency in the use of manpower in fabricating products from them.

Although too much depends on unpredictable factors to gauge the fourth quarter position with assurance, present indications, with respect both to steel in general and to certain particular forms of steel which normally constitute a large portion of civilian consumption, are that no substantial increase in the flow of steel into civilian uses should be planned for the rest of the year.

COPPER

(COMBINED COPPER COMMITTEE—FORMED JANUARY 1943—JOINT WITH C. R. M. B.)

No military or essential civilian programs are at present being delayed by lack of copper, but the position is not as good as it was a few months ago. The C.P.R.B.-C.R.M.B. Combined Copper Committee in its fourth report of May 31, 1944, estimated that supply in 1944 would exceed requirements by about 50 thousand tons, or a little over one percent, whereas in January of this year a combined surplus of 258,000 tons for the year was expected. This deterioration is entirely due to a decrease in the estimates of U.S. production resulting from a decrease in available manpower. There has been very little change in requirements. The reduction in estimated 1944 requirements between January and May is almost entirely the result of the substitution of "estimated deliveries" for "screened requirements" in the U.S. figures. Relaxation of restrictions made since the beginning of the year to permit expanded military and essential civilian use add only about 9,000 tons to 1944 requirements.

During the past two years, copper production in the U.S. has relied substantially on the use of furloughed soldiers and a very generous draft deferment policy. Because of the increasingly urgent demands for men for the U.S. armed forces, the furloughing of soldiers for work in the copper mines has now been discontinued. Soldiers under 26 years of age already furloughed have been recalled, and draft deferments are much more difficult to obtain. As a result, it is now estimated that 1944 output from U.S. mines will fall short of 1943 by about 200,000 tons and will be nearly 250,000 tons below January estimates for the year.

The U.S. position will be alleviated by receipt of a portion of the Canadian output previously allocated to the U.K., and U.K.'s assumption of responsibility for meeting a significant part of the Russian copper requirements formerly met by the U.S.

The 1943-1944 copper position after

TABLE 30.—THE COMBINED COPPER POSITION, 1943-1944
(Unit - Thousand Short Tons, Rough Stock Basis)

ITEM	Combined Total	United States	United Kingdom	Canada
1943				
Supply	4,467	3,260	943	264
Consumption	4,315	3,128	896	291
Ammunition	2,018	1,457	390	177
Other	2,297	1,707	506	84
1944				
Supply	4,128	3,059	877	192
Requirements	4,073	3,064 a/	807	202
Ammunition	1,755	1,306	288	137
Other	2,338	1,758	519	65

a/ Estimated deliveries.

taking into account inter-country transfers is shown in Table 30. In spite of recent increases in artillery ammunition programs, 1944 requirements of copper for ammunition are expected to be less than actual consumption for this purpose in 1943 in all three countries—in the U.S. by nearly 10 percent, in the U.K. by over 26 percent, and in Canada by over 22 percent.

The close balance between requirements and supply means that there is room for very little increase in consumption above requirements now programmed. Moreover, the U.S. will make no progress towards the accumulation of the 600,000 ton government stockpile of refined copper recommended as a goal by the WPB. The U.S. stockpile as of January 1, 1944 was about 230,000 tons. Combined stocks, over and above minimum working stocks, were slightly more than one month's supply at the beginning of the year and will be only a little higher at the year end. The U.K.'s minimum stock requirement is abnormally high at present because of restrictions on inland transportation necessitated by military movements; reduction of this requirement would improve the free stock position correspondingly.

In June, the C.P.R.B. and C.R.M.B. formally approved the following recommendations proposed by the Combined Copper Committee in its fourth report: (1) that the national authorities make every effort to maximize output from existing facilities within the limitations of available manpower and equipment; (2) that they also complete expansion projects already begun which might yield additional supplies before mid-1945; (3) that greater caution be exercised in permitting expanded use of copper for essential needs; (4) that no increase in nonessential uses be permitted; (5) that all practicable steps continue to be taken to augment the supply of scrap and to conserve refined supplies by the most efficient use of this scrap.

ALUMINUM

(COMBINED ALUMINUM AND MAGNESIUM COMMITTEE—FORMED MARCH 1943—JOINT WITH C.R.M.B.)

All essential requirements for aluminum were met in 1943, and the estimate of the combined surplus of primary metal at the beginning of 1944 amounted to 518 million pounds.

The curtailment of ingot production initiated in the late fall of 1943 in order to balance supply and essential requirements, to release labor and materials for other needs, and to conserve coal, has continued. During the second half of this year, U.S. primary production will be at an annual rate of 1,632 million pounds, representing a curtailment of 626 million pounds from the peak annual rate of 2,257 million pounds reached in October 1943 (compared with 2,354 million pounds installed capacity). There is the probability that later in the year there will be a further cut in U.S. primary production of 72 million pounds or more annually, not reflected in Table 31. Recent and estimated future U.K. production is at an annual rate of 69 million pounds, which represents a curtailment of 53 million pounds from the annual rated capacity of 112 million pounds. Canada is also cutting back production from the peak output of 1,137 million pounds reached in January 1944 to an annual rate of 860 million pounds by the first part of 1945.

In view of the curtailed aluminum output and the large stocks of bauxite held in the various countries, bauxite production has been substantially cut in the U.S., the Gold Coast, Brazil, and British and Dutch Guiana.

Based on the statistics for 1944 (actuals through March) the combined metal position shows a net surplus of 148 million pounds for the first six months of this year, while a theoretical deficit of 156 million pounds is indicated for the second half of the year. This deficit, which will probably not materialize because actual orders may not reach the level of stated requirements, can readily be met from ingot stocks, aggregating 760 million pounds at the beginning of June. Holdings of total ingot stocks on June 1 are shown in Table 32.

In addition to the stocks shown in Table 32, there are substantial amounts of metal held in the various fabricating plants, as well as stocks of fabricated products in the plants of fabricators and consumers in the three countries.

Total requirements of 1,991 million pounds shown in Table 31 for the last half of 1944 show a decrease of 124 million pounds from those presented at the beginning of the year, the decrease being caused primarily by the drop in the U.S. figures.

U.S. aircraft requirements have been reduced for the last half of 1944 by 101 million pounds (81 million pounds in requirements and 20 million pounds by reducing pipeline stocks) to the current estimate of 931 million pounds. Earlier U.S. Army figures included requirements of 96 million pounds for the

Table 31.—THE COMBINED ALUMINUM POSITION BY QUARTERS, 1943-1944
(Unit - Million Pounds of Ingot Equivalents)

COUNTRY	1943					1944				
	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Total supply a/	3,723	784	884	971	1,084	3,810	1,016	959	917	918
Primary	2,951	613	699	780	859	2,801	785	703	660	653
Secondary	772	171	185	191	225	1,009	231	256	257	265
United States	2,361	476	553	620	712	2,438	634	618	587	593
Primary	1,840	362	428	492	558	1,736	479	441	406	408
Secondary	521	114	125	128	154	696	155	177	179	185
United Kingdom	368	87	88	92	101	381	100	92	93	96
Primary	125	32	30	31	32	78	26	17	17	18
Secondary	243	55	58	61	69	303	74	76	76	77
Canada	1,094	221	243	259	271	991	282	248	237	230
Primary	966	219	241	257	269	981	280	245	235	227
Secondary	8	2	2	2	2	10	2	3	2	3
Total Requirements	2,982	684	687	770	841	3,818	859	968	1,004	987
United States b/	1,985	458	445	489	541	2,682	563	669	708	685
Air	1,477	341	338	376	422	1,801	417	455	465	466
Army and Navy	254	70	60	58	66	464	82	116	143	123
All other	192	41	47	51	53	360	64	100	100	96
United Kingdom c/	793	184	197	199	213	902	222	218	230	232
Air	667	162	157	170	178	684	150	169	168	171
Army and Navy	56	14	13	14	15	67	14	17	19	18
All other	70	18	17	15	20	154	28	36	44	43
Canada d/	72	13	16	24	19	40	10	10	10	10
Russia f/	164	22	30	36	76	234	51	67	55	61
All other countries f/	30	7	9	6	12	14	3	4	3	4
Surplus or deficit (-)	+741	+100	+197	+201	+243	-8	+157	-9	87	-69

a/ Supply is actual domestic production for each country through March 1944; estimates thereafter.
b/ U.S. - 1943 and 1st quarter 1944 are shipments of products and direct-use ingot; balance of 1944 is estimated. Pipeline additions for 1943, included in aircraft data in the December 31 report, have now been omitted. Navy figures exclude powder shipped to U.K.
c/ U.K. - 1943 and 1st quarter 1944, actual releases of primary and secondary ingot and scrap in U.K. plus deliveries of fabricated products from Canada and U.S.; balance of 1944 is estimated.
d/ Canada - 1943 and 1st quarter 1944, shipments of products and direct-use ingot; balance of 1944 is estimated.
f/ Russia and all other - 1943 and 1st quarter 1944, shipments from U.S., U.K., and Canada; balance of 1944, estimated requirements on these three countries.

Table 32.—COMBINED ALUMINUM INGOT STOCKS ON JUNE 1, 1944
(Unit - Million Pounds)

ITEM	Combined Total	United States	United Kingdom	Canada
Total	760	499	246	15
Primary	677	491	211	15
Government	558	347	211	0
Reduction Plants	119	104	0	15
Secondary	83	48	35 a/	0
Government	40	27	13	0
Smelters	43	21	22	0

a/ Government and industry stocks as of May 1, 1944.

landing-mat program, which has now been cut back by 75 million pounds for the six-month period.

Russian requirements increased from 88 million pounds to 106 million pounds for the period, whereas Canadian requirements were reduced from 34 million pounds to 20 million pounds. Requirements for the U.K. and other countries remain substantially unchanged, except for a reduction in U.K. requirements of fabricated products from North America.

The programs calling for expansion of fabricating facilities in the three countries have been essentially completed, and with the possible exception of atomized aluminum powder capacity in the U.S. and U.K., no shortages are anticipated in the coming months.

The easier supply position has permitted certain adjustments in control measures, chiefly in the U.S. and Canada. It has been agreed that each of the three countries will keep the others informed in advance of all plans for future changes, including any plans for export to other countries.

On balance, estimated combined production and stocks are more than sufficient to meet all stated requirements and supplementary programs for the second half of 1944.

MAGNESIUM

(COMBINED ALUMINUM AND MAGNESIUM COMMITTEE—FORMED MARCH 1943—JOINT WITH C.R.M.B.)

The combined magnesium metal position indicates a surplus of 140 million pounds in 1943 and 43 million pounds in 1944. The removal of restrictions on the use of magnesium made possible by the continuing surpluses has not resulted in any sizable increase in usage for aircraft and other purposes.

Early in 1944, magnesium production was cut back in the U.K. in order to conserve labor, power, and raw materials, the U.S. and Canada assuming the responsibility for providing the balance of U.K. requirements. Later the U.S. also curtailed production in order to bring supply into more reasonable balance with consumption.

Stocks of ingot on March 31, 1944, amounted to 126 million pounds, of which 93 million were in the U.S. and 33 million pounds were in the U.K. The magnesium position of each country is shown in Table 33.

TABLE 33.—THE COMBINED MAGNESIUM POSITION
(Unit - Million Pounds of Ingot)

ITEM	Combined Total	United States	United Kingdom	Canada
1943				
Supply	450	391	52	7
Requirements	310	228	81	1
Balance	+140	+163	-29	+6
1944				
Supply	520	466	43	11
Requirements	477	370	105	2
Balance	+43	+96	-62	+9

PULP AND PAPER

(COMBINED PULP AND PAPER COMMITTEE—FORMED AUGUST 1943—JOINT WITH C.R.M.B.)

In submitting its final report last February the Combined Pulp and Paper Committee expressed the opinion that, while the prospective pulp and paper position of the U.S., the U.K., and Canada appeared rather less unfavorable than earlier estimates had suggested, there still existed an over-all pulpwood deficit sufficiently large to require continuous effort on the part of the appropriate national agencies dealing with the difficult administrative problems involved in this field. After presenting the report, the Committee, at its request, was discharged.

Statistics on the pulp and paper supply, requirement, and stock position of the U.S., the U.K., and Canada, as reported by the Committee, were presented

in the last semi-annual report. No subsequent statistical compilation has been made on a combined basis. In accepting for the purpose of its analysis the requirements for paper products as stated to it by the national agencies of the U.S., the U.K., and Canada, the Committee neither rejected nor indorsed studies of essentiality of the uses of paper products upon which these stated requirements were based.

The final report of the Committee suggested steps necessary to increase further the supply of pulpwood and pulp in order to bridge the gap between anticipated supplies and requirements. These recommendations, 1/ and the action taken to implement them, may be summarized as follows:

1. Newsprint

Some of the shortage of pulpwood needed for products other than newsprint might be reduced by:

(a) diverting wood from the production of newsprint, in which a 3.1 percent surplus over requirements was indicated, to chemical pulp mills in both Canada and the U.S. which were idle, or operating at reduced capacity, or

(b) extending the practice of substituting pulp production for newsprint in newsprint mills in both Canada and the U.S.

In both the U.S. and Canada efforts to increase pulpwood supply are in general directed toward the over-all shortage, rather than to the position of individual mills. Experience has shown that a piecemeal approach, through mandatory allocation, serves to discourage efficient production. Production of pulp from newsprint machines has been extended in both countries, with collaboration of the Administrations, as far as approved newsprint requirements permit.

2. Dissolving Pulp

The Committee recommended that an intensive study should be undertaken immediately by the proper administrative branches in both the U.S. and Canada, with the aim of getting much-needed supplies of pulpwood into those dissolving pulp mills of the Pacific Northwest, on either side of the border, which had idle capacity for the manufacture of this urgent wartime need.

An agreement between the Canadian Timber Control and the Forest Products Bureau, WPB, was announced April 19, 1944, covering importation of pulpwood and saw-logs from British Columbia to the Puget Sound Area in 1944, in amounts exceeding 1943. The additional supplies, though small in relation to total requirements, will enable some U.S. mills to avoid a shut-down for lack of logs. In British Columbia, the production of dissolving pulps will be reduced in 1944 as compared with 1943.

3. Operating Arrangements Between the WPB and the Wartime Prices and Trade Board

The Committee recommended further examination and prompt settlement through normal coordinating machinery of the difficulties which have developed in applying the principles of an agreement, dated November 11, 1943, between representatives of the WPB and W.P.T.B. regarding the proportionate production of various materials in Canada and their shipment to the U.S.

The two agencies have advised the Combined Boards that the difficulties in question have been settled in accordance with the terms of the above agreement.

4. Canadian Woods Labor for Northeastern U.S.

The Committee also recommended similar action, through the normal coordinating machinery, regarding the working

1/ The texts of reports covering implementation of these recommendations by the administrative agencies of the U.S. and Canada have been made available in C.P.R.B. Paper 33/5, where fuller details on the various matters enumerated in the text will be found.

difficulties experienced in maintaining the agreed pool of Canadian labor for employment in northeastern United States.

This matter is within the administrative jurisdiction of the War Manpower Commission in the U.S. and the Department of Labor in Canada. On April 22 a joint announcement by these agencies stated that satisfactory arrangements had been agreed upon between them.

5. Exports of Canadian Pulpwood to the U.S.

A similar action was recommended with reference to difficulties experienced in the production and flow of export pulpwood from Canada to the U.S., attributable to restrictive administrative measures (notably Canadian Timber Control Order No. 20).

Following upward revision of Canadian domestic pulpwood price ceilings, and the introduction of Maximum Price Regulation 530 respecting pulpwood imported from Canada to the Northeastern States, which together were calculated to stimulate production and facilitate control, Canadian Timber Control Order No. 20 was rescinded, effective May 1.

6. Labor Recruiting Campaigns

The Committee recommended continued action by the appropriate agencies to increase and encourage the recruitment of woods labor in the various sections of the U.S. and Canada.

Continued efforts and measures to increase the supply of woods labor—regular, seasonal, and part-time—are reported by the Administrations in the U.S. and Canada. These are being prosecuted on a broad front, with the collaboration of government agencies, the public press, and industry.

7. The Use of Additional Long Fibre Pulp

The Committee recommended a study of the effect of the availability of additional long fibre pulp of high quality on closing the gap between supply and requirements of paper products. This would include:

(a) The possibility of further reduction in basis weights to determine whether the area of paper and paper products could be further increased.

(b) The opportunity for expanded use of reclaimed waste paper as an additional extender.

The Forest Products Bureau, WPB, after careful study of this recommendation, has advised that, in its considered opinion, the proposed review would now serve no useful purpose in view of the extensive changes in the paper situation which preclude significant comparisons.

THE COMBINED PRODUCTION AND RESOURCES BOARD

CHARTER AND COMMITTEE TERMS OF REFERENCE

JULY 22, 1944

THE CHARTER OF THE COMBINED PRODUCTION AND RESOURCES BOARD

In order to complete the organization needed for the most effective use of the combined resources of North America (United States and Canada) and the United Kingdom, for the prosecution of the war, there is hereby established a Combined Production and Resources Board.

1. The Board shall consist of the Chairman of the War Production Board, representing the United States, the Minister of Production, representing the United Kingdom, and the Minister of Munitions and Supply, representing Canada.

2. The Board shall:

(a) Combine the production programs of the United States, the United Kingdom, and Canada, into a single integrated program, adjusted to the strategic requirements of the war, as indicated to the Board by the Combined Chiefs of Staff, and to all relevant production factors. In this connection, the Board shall take account of the need for maximum utilization of the productive resources available to the United States, the British Commonwealth of Nations, and the United Nations, the need to reduce demands on shipping to a minimum, and the essential needs of the civilian populations.

(b) In close collaboration with the Combined Chiefs of Staff, assure the continuous adjustment of the combined production program to meet changing military requirements.

3. To this end, the Combined Chiefs of Staff and the Combined Munitions Assignment Board shall keep the Combined Production and Resources Board currently informed concerning military requirements, and the Combined Production and Resources Board shall keep the Combined Chiefs of Staff and the Combined Munitions Assignment Board currently informed concerning the facts and possibilities of production.

4. To facilitate continuous operation, the members of the Board shall each appoint a Deputy; and the Board shall form a combined staff. The Board shall arrange for such conferences among United States and United Kingdom and Canadian personnel as it may from time to time deem necessary or appropriate to study particular production needs; and utilize the Joint War Production Staff in London, the Combined Raw Materials Board, the Joint Aircraft Committee, and other existing combined or national agencies for war production in such manner and to such extent as it shall deem necessary.

TERMS OF REFERENCE OF THE C.P.R.B. COMMITTEES

LONDON COMMITTEE OF THE C. P. R. B.

The function of the London Committee of the C.P.R.B. is to deal with those aspects of the work of the C.P.R.B. which are most conveniently handled in London especially where detailed examination of the facts of United Kingdom production is involved. Within the general framework of principles approved by C.P.R.B. and in close connection with the Joint War Production Staff the London Committee will:

1. Consider and make recommendations on proposed adjustments in U.K. production programs which arise in connection with combined production planning by C.P.R.B.

2. To make recommendations from time to time to the C.P.R.B. in the field of combined production planning.

3. Serve as a means by which preliminary consideration can be given in London to combined production problems arising out of the work of J.W.P.S.

4. Act as a link between C.P.R.B. and Commonwealth Supply Council and other authorities in London in questions affecting the productive resources and requirements of British countries (other than U.K. and Canada) and of other United Nations within the British sphere.

5. Deal with such other matters as shall be agreed upon from time to time between the two members of the Combined Production and Resources Board.

C. P. R. B.-C. F. B. AGRICULTURAL AND FOOD MACHINERY COMMITTEE

To assemble all pertinent facts and recommend such action as may be advisable on all problems concerning requirements, supplies, production and distribution of agricultural implements and machinery and food processing machinery.

C. P. R. B.-C. R. M. B. COMBINED ALUMINUM AND MAGNESIUM COMMITTEE

To keep under constant review the over-all aluminum and magnesium supply and requirements position of the United Nations with a view to insuring that the most economical and efficient use is made of available supplies, and to submit from time to time to the C.P.R.B. and the C.R.M.B. such proposals as appear desirable to effect any necessary adjustments in the over-all position.

C. P. R. B.-C. R. M. B. COMBINED COAL COMMITTEE

The Washington Combined Coal Committee will, in concert with the London C.P.R.B. Coal Committee, assemble all pertinent facts and recommend such action as may be advisable on all problems of coal supply and requirements for overseas operational purposes and for conquered and liberated territories where responsibility to insure supply rests with the British Empire or the U.S.

C. P. R. B.-C. R. M. B. COMBINED CONSERVATION COMMITTEE

1. To promote the active interchange between the U.S., U.K., and Canada of information on matters relating to conservation, and in this connection to serve as the U.S. counterpart of the Anglo-American Conservation Committee in London, establishing close working relations with that Committee.

2. To make recommendations for the adoption of improved practices found through the interchange of information in this field in order that the critical materials available to the U.S., U.K., and Canada shall be used to the greatest advantage. Recommendations calling for formal action by any national government agency shall be made to the C.P.R.B. and C.R.M.B.

3. To undertake such special inquiries as may be needed to implement its work, after consultation with appropriate officers of the two Boards.

4. To appoint sub-committees, with the approval of the appropriate officers of the two Boards.

C. P. R. B.-C. R. M. B. COMBINED COPPER COMMITTEE

To keep under review the supply and requirements position of copper and copper producing and fabricating industries

and to recommend, from time to time, such action in regard thereto as may be advisable.

C.P.R.B.-C.R.M.B. COMBINED FOOTWEAR, LEATHER AND HIDES COMMITTEE

1. To keep under constant review and to report from time to time as may be necessary on the situation in reference to:

a. Footwear and other leather products.

b. Leather and leather substitute materials.

c. Hides.

2. For the purpose of carrying out the functions described in Paragraph 1, the Committee shall:

a. Determine the scope of its inquires as to -

i. Categories of footwear and other leather products.

ii. Types of leather.

iii. Types of hides.

b. Determine the statistical basis upon which information shall be gathered with a view, as far as possible, to having the figures of all the countries covered reduced to a comparable basis.

c. Examine the stated requirements of all the countries concerned (including the potential requirements of occupied territories) for footwear and other leather products and the consequent requirements of leather and hides.

d. Examine the combined facilities for making -

i. Footwear and other leather products.

ii. Leather and leather substitute materials.

e. Examine the supplies of hides available to all the countries concerned.

f. Make recommendations to the C.P.R.B. and C.R.M.B. concerning -

i. The combined facilities for producing footwear and other leather products and for producing leather with a view to their best possible use to meet minimum essential requirements.

ii. Measures that might be taken to meet deficit requirements of footwear and other leather products and of leather, and if additional production is indicated, the country of location of such production.

iii. The distribution of the available quantity of footwear and other leather products.

iv. The allocation of leather and hides between the countries concerned.

g. Examine and report on any other matters in relation to footwear and other leather products, leather and hides and leather substitute materials which the Committee considers desirable.

C.P.R.B.-C.R.M.B. COMBINED STEEL COMMITTEE

Revision of the terms of reference of the Steel Committee, under discussion at the time of previous issue, has been further deferred.

C.P.R.B. INTERNAL COMBUSTION ENGINE COMMITTEE

To ascertain and report the facts concerning the requirements, supplies, production and uses of internal combustion engines in the U.S., U.K., and Canada.

To recommend to the Combined Production and Resources Board, the distribution of the productive capacity for internal combustion engines between the U.S., U.K., and Canada.

C.P.R.B. MACHINE TOOLS COMMITTEE

1. To ascertain and report on the position of requirements for machine tools by the United Nations.

2. To ascertain and report on the production plans for machine tools of the U.S., U.K., and Canada as currently formulated.

3. To ascertain the nature and extent of the stocks of machine tools in the U.S., U.K., and Canada, and how far such stocks and unemployed machines, generally, are being and should be made available to meet the requirements and in formulating the production plans of each country.

4. To ascertain if and how far the production plans for machine tools in the U.S., U.K., and Canada are capable of, and in need of, adjustment in the best common interest.

5. To report generally and recommend, on the machine tool position to the Combined Production and Resources Board.

C.P.R.B. MEDICAL SUPPLIES COMMITTEE

1. To advise the Board on all matters of medical supplies which may come before it.

a. The term "medical supplies" shall be deemed to cover materials, equipment and supplies used in the diagnosis, cure, mitigation or prevention of disease and treatment and care of injury in men or animal.

2. To make recommendations as to measures necessary to insure that the combined production and resources of medical supplies of the U.S., U.K., and Canada are adequate for the effective prosecution of the war.

3. To deal with the problems of medical supplies which can be shown to require combined planning:

a. By examining the stated requirements and considering potential requirements of all countries concerned including occupied territories.

b. By examining the existing combined facilities in order to make recommendations as to how they may be best utilized to provide the necessary requirements.

c. By making recommendations as to the measures which might be taken to meet deficit requirements, and if additional production is indicated, suggestions as to the country of location of such production.

d. By making recommendations as to distribution of the total available quantity of medical supplies.

e. By making recommendations as to the accumulation and location of stockpiles of medical supplies for use in the event of the outbreak of disease or for use in the rehabilitation of countries.

4. The Committee will avail itself of the assistance of all existing agencies in each country in order to obtain all necessary information, including the methods of concentration and curtailment of production and limitation of consumption of medical supplies being carried out in each country.

C.P.R.B. PUBLIC UTILITIES COMMITTEE

Within the authority of the memorandum of June 9, 1942, of the President and Prime Ministers, to assemble all pertinent facts and recommend such action as may be advisable concerning requirements, supplies and production of equipment to reestablish electric, gas, water and telecommunication services in the liberated and conquered areas which may be required during the relief period.

C.P.R.B. TIRES AND TUBES COMMITTEE

To assemble all pertinent facts and recommend such action as may be advisable on all problems concerning requirements, supplies, production, and distribution of tires and tubes.

C.P.R.B. TEXTILE COMMITTEE

1. To receive periodically from the appropriate authorities all requirements of the non-Axis nations for textiles together with statements as to their essentiality and to recommend to C.P.R.B. the extent to which satisfaction of such requirements is essential to the prosecution of the war and to meet minimum essential civilian standards of consumption.

2. To ascertain and advise the C.P.R.B. as to the probable requirements of textiles for relief and rehabilitation in occupied and enemy countries and the steps necessary to fill such minimum requirements in due time.

3. To make recommendations to the C.P.R.B. as to the quantities of textiles which each of the United Nations should provide for export over periods long enough for broad planning in the light of its productive capacity and domestic requirements.

4. To make recommendations to C.P.R.B. as to the allocation of the export production of the several United Nations on a country or area basis so as best to insure satisfaction of approved requirements of importing countries and of the combined relief organization.

5. To examine individual types of textiles which present special production difficulties and to make recommendations to C.P.R.B.

6. To decide with the assistance of the technical experts on the most appropriate unit of measure for use in planning production and supplies of the various textile products.

7. The Textile Committee shall have powers to set up working groups in such

areas as it shall consider suitable to undertake such duties as the Textile Committee shall agree.

C.P.R.B TRANSPORTATION EQUIPMENT COMMITTEE

Within the authority of the memorandum of June 9, 1942, of the President and Prime Minister, to assemble all pertinent facts concerning requirements, supplies and production of equipment, including utilization of available equipment, which may be required to maintain or to reestablish railway, port, and inland waterway transportation facilities and services in areas outside the U.S., U.K., and Canada, including liberated areas during the relief period, and to recommend such actions as may be necessary concerning the requirements on the U.S., U.K., and Canada for the supply and production of such materials and equipment.

For matters within the scope of other committees of C.P.R.B., the Committee shall request the Board to make such information available.

C. P. R. B. TRUCK COMMITTEE

1. This Committee is to investigate and make recommendations concerning the distribution of production between United Kingdom, United States, and Canada, and the Dominions and India of wheeled transport vehicles for the military and civilian needs of the United Nations.

2. The analysis will take into consideration:

a. Standardization of models.

b. The stated requirements both military and civilian of the various authorities.

c. Appraisal of production facilities in the various represented nations.

d. The type of pack in which vehicles are being prepared for shipment to the various destinations.

e. The planning of production so as to impose the minimum strain on shipping.

f. The allocation of rubber for the manufacture of tires.

g. A review of work being done by other agencies relative to this subject.

3. The Committee will also review the relation between over-all tire and vehicle programs and make recommendations as to best sources of supply for maintenance tires.

4. The Committee will examine the entire spare situation and make recommendations as to the planning of future production of spares on the scale necessary to service satisfactorily new vehicles and reduce to a minimum the vehicles at present immobilized because of lack of spares, and will also make recommendations concerning the distribution of production of such spares.