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THE COMMODITIES DIVISION
PLANNING BRANCH, O. A. S. W.

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THE COMMODITIES DIVISION
PLANNING BRANCH, O A S. V.

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I. INTRODUCTION.

1. The situation of the United States with regard to raw materials.

a. It is the opinion of the average citizen that the United States produces nearly everything it requires and that there are but few materials and commodities that must be imported. It is estimated that the United States possesses one-half the world's coal resources, and its deposits of iron, copper, zinc, lead, and molybdenum are among the largest in the world. Its resources are not self-sufficient, however, for either its industrial peace-time or war-time military requirements. Extensive and unusual demands have arisen from the high standards of living which have resulted in an exceptional economic development and complex needs. The importance of independence for a supply of materials necessary to the existence of any nation can be appreciated by observing recent efforts toward expansion undertaken by Germany and Italy. No modern nation can justly claim self-sufficiency, and, while we are extremely well endowed by nature with resources, our deficiencies are of inestimable importance. Our demands are so complex as to force us to draw upon the resources of the entire world. There have been evolved specialized sources for the principal commodities and raw materials required by the world for industrial and military purposes. Important factors in the availability of such materials are climate differences, natural resources, soil, topography, skill and modern systems of transportation. As a result the United States is the world's leading producer of cotton; Japan is the world's principal source of silk, China, tungsten and antimony; Canada, nickel, Malay Peninsula, Dutch and British East Indies - tin and rubber, India, jute, and many other very important items may be included.

On the basis of dependency on sources, raw materials and commodities may be divided into four groups, as follows

- a. Those available in large quantities for export.
- b. Those adequate to meet domestic demands without appreciable excess or deficiency,
- c. Those available to meet domestic demands, partially dependent on foreign sources.
- d. Those for which the country must depend entirely on foreign sources.

The United States is at an advantage for those items falling in groups a and b above, and they require no special consideration. This enviable position is enjoyed with respect to coal, iron, copper, cotton, sulphur, lead, zinc, oil, phosphates, etc. There are, however, many other raw materials essential to peace-time industry and to war, the latter event vastly increasing the demand. The war industries must be supplied and peace industries must have as

little interference as possible. If deficiencies in the domestic supply normally exist, these commodities fall into groups c and d shown on page one. For convenience supplies falling into groups c and d are called strategic and critical materials. The readjustment of the disturbed balance between the supply of available raw materials and the demands of the industries manufacturing munitions was one of the first problems presented to the Council of National Defense during the World War. Out of this necessity was born the Advisory Committee which attained its full development under the War Industries Board.

II. HISTORICAL.

1. The development of the War Industries Board.

a. The Council of National Defense. The occurrence of the World War may be considered as the background which led to the foundation of the Commodities Division of the Planning Branch as it exists today. A thorough study of that background is essential for a proper evaluation of the problems and experiences incident thereto, if we are to employ the knowledge acquired and intelligently apply it toward the solution of the problems of a future emergency. Such an analysis should serve to emphasize both the faults and the advantages alike. The scarcity of numerous commodities incident to the transformation of a peaceful nation into an efficient fighting machine, having tremendously increased demands for munitions, became evident during the World War. The gradual development of economic planning in the struggle to overcome the difficulties as they arose is an important part of the history of various government agencies. The Council of National Defense Act of August 29, 1916 (39 Stat. 619) was the first government agency authorized to control the resources of the Nation. It comprised in its organization an Advisory Committee, consisting of civilians of outstanding qualifications, especially selected, from representative industries. This committee began, just prior to the World War, to organize subcommittees for the purpose of assisting the government agencies in details associated with the production of munitions.

b. The General Munitions Board. The first authority for the Munitions Board was the Council of National Defense Act, which reads as follows

"RESOLVED, That the Secretary of War, as Chairman of the Council of National Defense, and under authority of the Act of August 29, 1916, "for the coordination of industry and resources for the national security and welfare", and under the specific authority in the Act which provides for the appointment of "subordinate bodies", shall appoint a purchasing board, Council of National Defense, to be composed of Army and Navy Department heads or officers appointed by them and representatives appointed by the Advisory Commission,

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the purpose being to coordinate the buying of the several departments, the establishing of precedence of orders, etc, including the ordinary commercial and industrial needs and the military requirements of the nation. Such committee shall have no authority at this time to issue purchase orders, make contracts or bind the Government in its purchases, all these things to be done, as at present, by the respective departments. The Chairman of the Committee, however, shall have authority to require, when necessary, that certain (conflicting) purchases be not made until the same, with a full statement of the facts, have been submitted to the Secretary of War or Navy."

The phrasing "purchasing board" was changed to general munitions board". The following plan of procedure was adopted April 4, 1917

"Plans of Procedure of Munitions Board of Council of National Defense Approved and Adopted April 4, 1917.

"The Munitions Board of the Council of National Defense in committee assembled deems it pertinent at this time to recognize and enumerate the following

"a. That questions of actual purchase of material are not to be handled by the 'Munitions Board". Its duties on the contrary will be confined, insofar as practicable, to facilitating the work of purchase and supply agencies now existing in the War and Navy Departments' organization.

"b. That the mission and purpose of the country is as set forth in the Message of the President.

"c. That this committee strongly affirms its intent to maintain insofar as may be practicable the existing order of things in the industrial condition of the country, the order of delivery, of military and naval material, both domestic and foreign, as provided under existing contracts, will not be disturbed unless absolutely necessary to meet requirements which may develop in the future.

"d. That in the execution of present and in placing future contracts for military and naval material, careful consideration will be given to industrial requirements so far as practicable.

"e. That order of priority of delivery of various kinds of material required by the War and Navy Departments will be determined so far as possible by cooperation between the various Bureaus and Offices of these Departments directly concerned and that full consideration will be given to the importance of early and prompt de-

livery of materials under contract, or subsequently ordered, for shipment abroad to belligerents friendly to the United States.

"f. That it is the opinion of this committee that immediate action should be taken by appropriate authority to insure the integrity and maintenance of the industrial organization of the country in relation to preparation of military and naval material and to emphasize the very high military importance of such industrial work.

"g. The Board recognizes the importance of supervising future commitments of United States manufacturers for delivery of material to foreign purchasers and that all such prospective foreign commitments should be subject to approval by competent authority in order to prevent interference with prompt delivery of more urgently needed military and naval material."

This organization was in existence from June 1917 to May 1918. At the beginning of the War the purchasing agencies of the United States' Government were either acting singly or in some instances were in actual competition with each other. The natural result was to send prices skyrocketing and certain agencies were deprived of essential items by others who were first in the market. The General Munitions Board was composed of a Chairman, a Secretary and representatives from the General Staff, U. S. Army, the Navy Department, Allied Purchasing Commission, and the United States Marine Corps. This Board functioned as a clearance committee and prepared a "clearance list", on which were placed those materials in which a shortage existed. Shortages became so numerous that the list comprised all materials of any consequence. The Council of National Defense had been relieved of its duties with reference to the production of war-making materials. In May 1918 the General Munitions Board was reorganized and continued in existence until July 24, 1918. Its duties were to issue clearances on current and immediate purchases on the shortage list.

c. The War Industries Board. The War Industries Board, created in July 1917, by the Council of National Defense, assumed the duties of the preceding organizations and it was under the direction of this Board that the Commodities Division attained its greatest development. One of its Commissioners was given control of supervision over raw materials and the Commodities Division was formed eventually, comprising approximately sixty committees.

(1) The Overman Act. - It should be emphasized that the principal reason for the creation of a superagency during the War was to insure the availability of the required quantities of materials at the time and place desired. The War Industries Board found that its efforts were rendered ineffective by the lack of sufficient authority to enforce its decisions. At the time of reorganization of the Board, the Army Commodity Committees and the Material Sections of the Navy

had been formed for the adjustment of conflicts, compilation of requirements, and the elimination of duplication of effort within their respective organizations. The lack of authority became so apparent that on May 28, 1918 the President reorganized it under the authority conferred upon him by the Overman Act. The President's letter became the charter of the Board and the following functions regarding the procurement, control and distribution of essential commodities were either specifically authorized or past authority materially augmented

- a. Creation of new and additional sources of supply.
- b. Conversion of existing facilities when necessary.
- c. Conservation of resources and facilities.
- d. Advice to government procuring agencies with regard to price-fixing.
- e. Priorities designed for regulation of production and distribution.
- f. Purchases of supplies for the Allies.
- g. Planning for the anticipated needs, and coordination of requirements.
- h. Decisions in cases of conflict.
- i. Collection and dissemination of statistics.

The additional executive power furnished the necessary authority for the extension of control over American industry. With the expansion and increase of the Commodity Sections, each one serving as a repository for information and advice of a highly technical nature in its own specialized sphere, they soon developed into the agencies controlling all matters having reference to requirements, apportionments, clearances and prices. They served as a meeting place in a common field of endeavor where all matters affecting commodities received decisive action. Representatives were furnished by the important government purchasing agencies and effective cooperation was obtained with various trade associations, producers and importers through the War Service Committees. The United States Chamber of Commerce was of great assistance in the mobilization of industry.

(2) The Commodities Division. The Commodities Division soon developed into the most active division of the War Industries Board during the War and was known as the backbone around which the whole structure of the Board was built. Mr. Baruch, who was the head of the Raw Materials Section of the parent organization, the Council of National Defense, and later became head of the War Industries Board, always stressed the importance of the Commodities Division. This division was the authorized means of contact between the War Industries Board and industry itself. Each commodity section had a War Service Committee through which all executive decisions, policies and plans were communicated to industry.

A summary of the activities of the Commodity Committees Division of the War Industries Board includes

- a. Determination of requirements and resources.
- b. Balancing requirements against resources and overcoming deficits when ascertained.
- c. Control of supplies and their distribution.
- d. Furnishing the utmost protection to the peace-time structure of the Nation, so the war effort would interfere as little as possible with the normal regimentation of the individual citizen.

(3) The Purchase, Storage and Traffic Division. The Purchase, Storage and Traffic Division of the General Staff was eventually organized hastily as a temporary expedient to guard against a threatened collapse of the Army supply system necessitated by a complete reorganization of procurement.

III. POST WAR ACTIVITIES.

1. The period of dissolution. The termination of the World War was characterized by dissolution and retrenchment. This has been true of all similar periods since the beginning of time. Efforts were directed toward reestablishing the country on a peace-time basis. On November 29, 1918, Mr. Bernard Baruch presented his resignation to the President and on December 31, 1918 the War Industries Board was dissolved. Certain permanent activities were transferred to other government agencies, but the various Boards and Committees, including the Commodity Sections, were disbanded.

a. The Commodity Committees of the Army. The Commodity Committees of the Army, operating under the jurisdiction of the Purchase, Storage and Traffic Division of the General Staff and composed of representatives from each of the Army Supply Bureaus interested in the respective commodity, were discontinued on December 24, 1918. The entire commodity committees' activities at the close of the World War comprised fifty-seven commodity sections of the War Industries Board, two hundred and seventy-one War Service Committees and forty-eight Army Commodity Committees. The discontinuance of all commodity committees shortly after the close of the World War resulted in almost a complete suspension of research, and compilation of data with regard to strategic and critical commodities until late in the year 1921

2. The Period of Reconstruction.

a. The National Defense Act. The National Defense Act as amended June 4, 1920 assigned to The Assistant Secretary of War certain additional duties with regard to supplies. By reason of that authority a memorandum issued December 24, 1921 revived the studies of strategic raw materials.

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b. General Orders No. 41, War Department. Paragraph 2a of General Orders No. 41, War Department, contain the first definite post-war mandate for the performance of the duties of the Commodities Division. The Assistant Secretary of War was specifically charged with "the collection of information and compilation of data pertaining to the sources of supply." You will note that this mandate fails to specify the sources of supply.

c. General Staff commodity studies. The General Staff had prepared some "commodity studies" before the creation of the Planning Branch, and in 1921 they were transmitted to this branch, with a letter from General Harbord suggesting that they be continued and other strategic materials should be studied.

d. Memorandum from Mr. Wainwright of July 26, 1922 to Chiefs of Supply Branches Mr. Wainwright appreciated the value of the commodity committees as the basis for successful planning and in a memorandum, dated July 26, 1922, to the Chiefs of the Supply Branches, directed the organization of two committees for the study of Chemicals and Machine Tools.

e. Instructions from The Assistant Secretary of War, July 12, 1924, increasing the number of commodity committees with more definitive authority. The Assistant Secretary of War on July 12, 1924 issued instructions increasing the number of commodity committees, authorizing them to determine "ways and means of insuring an adequate supply of strategic raw materials prior to, or immediately following an emergency". The Chief of the Supply Branch most concerned with the strategic raw material was charged with the formulation of complete plans for its procurement, in the event of an emergency, in amounts adequate for all military needs. In time of war the Chief of the Branch most interested in the respective commodity was also charged with its procurement. Apropos of the necessity of having on hand information similar to that compiled by the Commodity Section during the World War, Mr. Baruch is quoted as follows "There could perhaps be no more valuable measure of preparedness than the establishment in peace time of a bureau of planning and statistics (a fact-finding body), organized into about sixty commodity sections, whose function it would be to maintain current data on the productive capacity of the country". "In some cases it was next to impossible to get vital facts accurately compiled and to get them in time for the greatest usefulness in understanding and solving the problem. It is in this feature of the work that a peace-time bureau functioning continuously, watching with studious care the development and condition of each industry having a war value, could be of extraordinary significance if it should ever be necessary again to direct the industrial force of the country to the support of a great war". In effect he was urging the formation of an organization similar to the one now in operation, based on experiences gained from the last War.

f. Section 5a of the National Defense Act, June 4, 1920, definition of mission. Section 5a of the National Defense Act is at the present time the legal authority for the planning activities of The Assistant Secretary of War and dates from 1920. In 1925 the duties of the Commodities Division and of the Commodity Committees were defined by The Assistant Secretary of War as follows

(1) Commodities Division "It is the mission of the Coordinator of the Commodities Division to coordinate the efforts of the committees and direct their general action in accordance with the policies laid down by the Director of Procurement."

(2) Commodity Committees "The mission of each of the War Department Commodity Committees is to collect, collate and evaluate all available data pertinent to the items assigned to them. The Chairman is the Advisor to the War Department in all matters affecting his commodities."

(3) Review of Accomplishments since the World War and present operation.

a. Development and adoption of a definite course of procedure. The wisdom of the application of the old axiom "make haste slowly" has been demonstrated in the development and crystallization of thought and policy in the Planning Branch. It was to be expected that at the outset a certain amount of confusion would prevail. The result of continuous effort through the intervening years is apparent by reason of the very existence of the accumulated data relating to the subject. With the gradual growth of the branch, more definite policies were evolved leading to a definite objective. It is worthy of attention that the organization of the Commodities Division has withstood the test of time and is essentially the same as that developed by the War Industries Board.

b. Plans on all strategic raw materials have been prepared, one-third of which are revised in accordance with the 1933 Mobilization Plan and the remainder are in the process of revision. It is expected that all but four will be completed during the next six months.

c. Efforts made in evolving more definite procedures for strategic control methods which will be necessary in time of war to obtain strategic materials and make them available at the proper place at the time required.

d. The compilation of monographs on each strategic item for ready reference. In conjunction with this effort graphs have been prepared showing at a glance pertinent data with regard to sources, requirements, stocks, etc.

e. Following the trend of industrial and scientific

progress, technology, use, and supply upon which information with regard to the essentiality of the various commodities is based for indicated changes in the list of strategic and critical materials.

f. The preparation of monographs on studies of critical materials. This is a more difficult undertaking than the study of better known strategic materials. There are now fifty-two commodity monographs on critical materials - fifteen of which were revised in the last year. The revision of these monographs is necessarily a continuous performance and an average of fifteen revised plans a year will accomplish a total revision in approximately three years.

g. By reason of the activities of the Division in the study of commodities, it has become known as the best available and sometimes the only known source of information. This is of particular value with regard to congressional investigations, both committee and individual.

h. The Division has been of great value in making the Nation autarchic minded.

i. It is the office of record of the Army and Navy Munitions Board on all strategic and critical materials. Two files are maintained - one of which is to be turned over to that agency in event of an emergency.

j. The Commodities Division also prepares data on which replies are based on all communications for signature of the President, Secretary of War and The Assistant Secretary of War, pertaining to strategic and critical materials in their relation to the national defense.

(4) Reports required from Supply Arms and Services. Reports have been required from supply arms and services. These reports were based upon directives prepared in the Commodities Division, Planning Branch, Office of The Assistant Secretary of War. They are also intended to assure the continuance of the commodity studies.

The policy of the division is to interfere as little as possible with the supply arms and services, therefore, all directives should be carefully studied before being issued to be sure that information requested is furnished in the proper form without unnecessary details and after being issued compliance should be exacted within the time specified. It is desirable to emphasize that supervision is considered impossible, unless control is admitted to be an integral part. In other words, supervision is devoid of meaning, unless control is exercised. This control should be exercised with understanding and judgment in view of the wide variety of problems involved.

IV. INTERPRETATION OF PRESENT ORGANIZATION, POLICIES, AND ACTIVITIES OF THE COMMODITIES DIVISION OF THE PLANNING BRANCH.

1. In peace time.

a. Organization and Functions of the Commodities Division, Planning Branch, O A.S W.

The present organization of the Planning Branch, as previously stated, has been made possible by reason of the authority contained in Section 5a of the National Defense Act. Three men, namely, Mr. Crowell, Mr. Baruch, and Mr. Baker have been credited with the initiation of the accomplishment. The Commodities Division constitutes one of the divisions of the Planning Branch, it operates immediately under that branch. It comprises forty-three Commodity Committees, seventeen of which are now active and have personnel assigned to them for active work. The active commodity committee is composed of members from the several supply arms or services of the Army, having as a Chairman an officer from the supply arm or service with a major interest in the respective commodity under consideration. These commodity committees are consequently under the supervision of The Assistant Secretary of War and all membership is authorized by him after individual designation by the Chief of the Supply Arm or Service.

The existence of a skeleton organization capable of expansion into a unit of the War Department comprising the Army Commodity Committees similar to the one finally evolved during the World War is of unquestionable value. Such an organization, familiar with the problems encountered and the solutions adopted, insures the readiness of an agency to take advantage of this acquired experience and thus avoid the delay and confusion which would be connected with the development of new methods and a new organization to accomplish the same purpose. The peace time existence of the Commodities Division is available for representation on any corresponding division of any proposed super-agency authorized in event of war. This procedure has the virtue of avoiding arbitrary action as far as possible and also assures the coordination of planning, which is the responsibility of The Assistant Secretary of War.

The purpose of the Commodities Division is to establish a procedure for coordinating those activities of the War Department concerned with securing a supply of materials for the production of items required by the War Department and for rationing those materials in case of a shortage. In the execution of this mission the Commodities Division's activities are directed along the following lines

- a. Analysis of plans for procurement of strategic commodities.
- b. Preparation and evaluation of studies relating to procurement of critical commodities.

- c. Development of control measures for commodities.
- d. Collection of information showing requirements for specific commodities, together with data on sources, stocks, substitutes and trends.

(1) Summary of Activities of Commodity Committees. The activities of the committees are not restricted to any set form but are adjusted to the particular needs of their special problem. These activities may be briefly summarized as follows

- a. The determination of all military (Army and Navy) and civilian requirements.
- b. The study of all sources of supply.
- c. The comparison of requirements with available supply.
- d. The preparation of plans to meet resultant deficiencies, including the development of suggested control measures in the event of an emergency.

Attention has already been called to the representation through the Commodity Committees (Chairmen on the next higher agency now in existence, the Army and Navy Munitions Board, and the manner in which coordination is effected with the Navy. The commodity committee may be described as a mutual information bureau where there is free exchange of ideas and information. Coordination in military matters is vital and the commodity committees make this possible. That part of the War Department problem represented by requirements for strategic materials must be available for coordination with the needs of other war-making agencies and with the production capacity of industry. This necessitates the determination and consolidation of the requirements of the different supply arms and services. Such work is performed by the commodity committees. Another duty of a commodity committee is the constant study of the industries concerned in the manufacture of its respective commodity or material and to obtain definite and reliable information with regard to the capacity developing the possibilities for expansion or conversion when necessary. Knowing the sources, capacity requirements and other pertinent data, the Committee has the proper basis on which to determine the extent of its problem. Should its study indicate a shortage or the probability of a shortage, it is then necessary to develop the most reasonable solution possible. The study and consideration of the problem must be sufficiently continuous to produce results that are current. Constant coordination must be maintained between the different procurement agencies in the proposed use of materials and continuous consideration given to availability and capacity of sources of supply. To achieve this result is the responsibility of the commodity committees.

(2) Enumeration of information required in a Procurement Study.

A directive for the revision of Procurement Plans for strategic commodities was made on May 7, 1934, and sent to the various commodity committees. The revision of plans was considered necessary for the following reasons

- a. The new requirements incident to the 1933 War Department Mobilization Plan,
- b. Necessary reanalysis of army, navy and civilian requirements.
- c. Restatement of effects of substitution.
- d. Standardization of form to permit comparative analysis.
- e. Inclusion of the effect of closed and partially closed sea lanes
- f. Addition of a discussion of trends of production and consumption.
- g. Inclusion of the strategy of commodities with regard to control measures for procurement and distribution with especial reference to plans for industrial mobilization.

While it is not the purpose of this discussion to present the entire Directive, which will be found in the appendix, the main subdivisions follow

I. Discussion.

- 1. Material or Commodity.
- 2. Requirements.
- 3. Sources.
- 4. Requirements and estimated available supply compared. (On M-day and for twenty-four months, without substitutes)
- 5. Substitutes.
- 6. Requirements and estimated available supply on M-day with substitutes.
- 7. Prices.
- 8. Conservation measures.
- 9. Influencing factors
- 10. Emergency measures recommended.
- 11. Control and distribution measures recommended.
- 12. Other pertinent information.

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II. Statistical Study.

- 13. Requirements.
- 14. Sources, U S. and foreign.
- 15. Requirements versus available supply (without substitutes).
- 16. Effect of substitutes.
- 17. Personnel available.
- 18. Producers, importers, processors and technical contacts.
- 19. Other applicable data.
- 20. Signature by Chairman and all other members, to be forwarded to The Assistant Secretary of War through the Chief of Supply Arm or Service to which Chairman belongs.

It is evident that in planning for the war problems associated with war the first thing to be considered is the military and civilian requirements of raw materials and other commodities. The requirements for strategic materials are estimated by each supply arm and service by experts in regard to their respective materials with the help of information obtained from industry based on the requirements of the finished product. The consolidated requirements based on the 1933 Mobilization Plan are balanced against production and shortages determined. Studies by the commodity committees are based on this information and include considerations such as where curtailments can be effected, how the commodities may be obtained, and production increased when indicated, also the possible increase of available supply by substitutes, reclamation, conservation or suitable war reserves. In brief a plan or study should be a storehouse containing all information and control measures necessary to enable an intelligent man to apply the information furnished and put the plan into execution in any emergency that may arise.

(3) Strategic materials - definition and list.

The definition of strategic materials and the accompanying list approved by the Army and Navy Munitions Board on August 12, 1936, and made official for the War Department, is as follows

a. Definition.

"Strategic materials are those materials essential to the national defense for the supply of which in war dependence must be placed in whole, or in large part, on sources outside the continental limits of the United States, and for which strict conservation and distribution control measures will be necessary."

b. List.

- | | |
|-------------------------------|-------------------|
| 1. Aluminum | 12. Nickel |
| 2. Antimony | 13. Nux Vomica |
| 3. Chromium | 14. Opium |
| 4. Coconut Shells | 15. Optical Glass |
| 5. Coffee | 16. Quicksilver |
| 6. Hides | 17. Quinine |
| 7. Iodine | 18. Rubber |
| 8. Jute | 19. Silk |
| 9. Manganese, ferro-
grade | 20. Sisal |
| 10. Manila Fiber | 21. Tin |
| 11. Mica | 22. Tungsten |
| | 23. Wool |

Each strategic item is assigned to a commodity committee and in addition there are five critical items being studied by commodity committees. The commodity committees now active number seventeen and are listed below with the assigned items, as follows.

- No. 3 - Aluminum and Aluminum Alloys.
- No. 7 - Acids, Alkali and other Chemicals.
- No. 13 - Coconut Shells.
- No. 19 - Ferro-Alloys.
- No. 20 - Fiber.
- No. 23 - Foodstuffs.
- No. 27 - Hides, Leather, Leather Goods and Tanning Materials.
- No. 30 - Machine Tools.
- No. 31 - Medical Supplies, Surgical and Dental Instruments.
- No. 32 - Mica.
- No. 34 - Non-Ferrous Metals.
- No. 35 - Optical Glass and Instruments.
- No. 38 - Petroleum and Products.
- No. 42 - Rubber and Rubber Goods.
- No. 44 - Silk.
- No. 45 - Steel and Iron.
- No. 54 - Wool and Woolen Goods.

(4) Critical materials - definition and list.

The definition of critical materials and the list of these items were also adopted by the Army and Navy Munitions Board on August 12, 1936 and made official for the War Department. They are as follows

a. Definition.

"Critical materials are those materials essential to the national defense, the procurement problems

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of which in war, while difficult, are less serious than those of strategic materials due to greater resources or to a lesser degree of essentiality, and for which conservation and distribution control measures will probably be necessary."

b. List.

- | | |
|-------------------------------|-------------------------|
| 1. Abrasives | 27. Molybdenum |
| 2. Alcohol (Ethyl and Methyl) | 28. Nitric Acid |
| 3. Ammonia | 29. Oakum |
| 4. Arsenic | 30. Palm Oil |
| 5. Asbestos | 31. Paper and Pulp |
| 6. Asphalt | 32. Petroleum |
| 7. Cadmium | 33. Phenol |
| 8. Camphor | 34. Phosphate |
| 9. Castor Oil | 35. Platinum |
| 10. Chlorine | 36. Potash |
| 11. Copper | 37. Refractories |
| 12. Copra | 38. Scientific Glass |
| 13. Cork | 39. Shellac |
| 14. Cotton Linters | 40. Sugar |
| 15. Cryolite | 41. Sulphur and Pyrites |
| 16. Flaxseed | 42. Sulphuric Acid |
| 17. Fluorspar | 43. Tanning Materials |
| 18. Graphite | 44. Titanium |
| 19. Helium | 45. Toluol |
| 20. Hemp | 46. Turpentine |
| 21. Iron and Steel | 47. Uranium |
| 22. Kapok | 48. Vanadium |
| 23. Lead | 49. Wheat |
| 24. Lumber | 50. Wood Chemicals |
| 25. Machine Tools | 51. Zinc |
| 26. Magnesium | 52. Zirconium |

(5) Methods for making up deficiencies.

Commodity studies are necessary only for those items where shortages are expected, therefore means for overcoming such deficiencies must be given careful consideration. The methods most worthy of attention are rigid economy, increasing domestic production, stimulating imports, substitution and the accumulation of reserves.

(6) Methods suggested for the accumulation of reserves.

During the past few years methods have been suggested for the accumulation of a reserve of some of the most important of the strategic materials. The following methods chosen from many of those recommended are mentioned

- a. Direct purchase in world markets.
- b. Acquiring materials from foreign countries by exchange of government-owned agricultural products.
- c. Accepting materials in lieu of tariff duty payments.
- d. Accepting materials in partial payment on war debts.
- e. Use of emergency relief funds to stimulate domestic production.
- f. Transfer of confiscated materials.
- g. Appropriations for stock pile.
- h. Use of strategic materials in subsidiary currency.

The Army and Navy Munitions Board in a letter, dated May 5, 1934, to the Joint Board recommended that a physical war reserve be established in peace time for manganese ore, chromite ore, tin, tungsten ore, optical glass, nickel, mica, antimony and coconut charcoal. The War Department has indorsed a Bill H.R. 11001 to set up war reserves on four strategic materials - ferro manganese ore, chrome ore, tungsten ore, and pig tin. It is emphasized that the War Department has not sponsored legislation of this type.

Last year the first Act recognizing the value of strategic commodities was passed by Congress. This Bill prohibits the export of tin scrap, except by direct license by the President, and by authority delegated to the Secretary of State. The motive activating this Bill was to protect the detinning industry of this country as our only source of domestic tin. The amount processed corresponds to twenty-five to thirty-five per cent of the virgin tin imported.

(7) Control and distribution measures for commodities

Control measures must be certain to produce results, sufficiently flexible for adaptation in the varying degrees necessary when applied to a large variety of commodities, simple enough to avoid time losses and just in application to assure civilian, as well as military requirements. The measures suitable for a given item to meet any and all conditions at an unknown time are unpredictable. Past experience leads us to a consideration of the following methods

- a. Allocation of facilities. Briefly this method is based upon the "allocation" of existing facilities.
- b. Presidential proclamation. Raw materials and other commodities essential for war production may be controlled by presidential proclamation upon the recognition of a national emergency, by means of "priori-

ties", commandeering, and by arrangements between the Government and industry by War Service Committees. Imports of raw materials are to be carried on either by private enterprises or governmental agencies licensed by the War Trade Administration. These methods are described in detail in the Industrial Mobilization Plan.

b. Coordination with the Navy through the Army and Navy Munitions Board.

This Board has a Commodities Division with committees similar to the Commodities Division of the Planning Branch, O.A.S.W. The Chairmen of the War Department Commodity Committees and the Navy Department Commodity Committees constitute the Commodity Committees of the Army and Navy Munitions Board. It is intended for this Board to review the requirements, studies and plans presented by the Chairmen of the Commodity Committees of the War and the Navy Departments. As a policy forming and coordinating organization it contemplates adjustment of questions of priority, coordinating the activities and necessities of the two departments in such a manner that the coordinated plan or study will be representative of the requirements of both. This constitutes approval by the Secretary of War and the Secretary of the Navy by reason of the organization of the Board. The Commodities Division of the Office of The Assistant Secretary of War is the repository for a duplicate file of all plans in readiness for transfer to the Army and Navy Munitions Board, in event of an emergency. The Commodities Division of the Army and Navy Munitions Board is so organized that it reinforces the War Department Commodities Division by reason of its commodity committee representation, studies, and data for the next higher agency. Because of the similarity of organization and functions of the Commodities Division of this Board and our own the following quotation is presented, which has been extracted from the Industrial Mobilization Plan

"The Commodities Division is organized into such a number of commodity committees as may be found necessary to investigate the availability of strategic and critical raw materials necessary to support joint plans of operations and to recommend the development and use of substitutes to relieve probable acute shortages. Each commodity committee consists of one or more representatives from the War Department and one or more from the Navy Department. Each committee representative will be one whose normal duties require detailed knowledge of the uses in his department of the commodity under study in the committee to which he is appointed.

"The work of the several commodity committees is

coordinated by two commodity division representatives, one designated by the Office of The Assistant Secretary of War and one designated by the Office of the Chief of Naval Operations. The division representatives are responsible for the efficient performance of the work of the division and report direct to the Executive Committee.

"Functions - The Commodities Division is charged with --

- (a) Coordinating those joint studies and activities of the War and Navy Departments directed toward insuring a supply of strategic and critical raw materials for the production of articles required by the War and Navy Departments to support a joint plan of operations.
- (b) Recommending the distribution of the available supply between the War and Navy Departments in case of actual or indicated shortages in time of war, in accordance with priorities established by the Joint Board.
- (c) Promoting the development and use of substitutes to relieve indicated shortages in strategic and critical raw materials.
- (d) Making, under the direction of the Executive Committee, studies of the parts of the Industrial Mobilization Plan which pertain to strategic and critical raw materials, reporting the status of the plans and submitting recommended changes or additions to the Executive Committee".

The duties of the Commodities Division of the Army and Navy Munitions Board are of especial importance to us, because the Commodities Division of the War Department is represented on that Board by reason of its commodity committees, therefore the interests of the two are identical with regard to raw materials and commodities. In order to present a complete picture the functions executed through the commodity committees as stated in the Industrial Mobilization Plan follow

"Functions.--The functions of this division are exercised through commodity committees. These functions are

- (1) To ascertain the probable total requirements.
- (2) To assure timely supply of critical and strategic raw materials to war industries and other essential industries.

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- (3) To anticipate possible shortages in production of commodities
- (4) To control the distribution of the stocks of available supplies in conformity with the determined priorities.
- (5) To investigate and recommend the scales of prices at which essential materials may be sold and to administer price-control measures in accordance with established policies.
- (6) To prepare and supervise the execution of regulations relating to the sale and production of commodities.
- (7) To encourage the use of other materials by less essential industries where necessary to prevent the possibility of a shortage of critical and strategic materials.
- (8) To ascertain the needs of industries engaged in producing critical and strategic materials, and find means to satisfy them.
- (9) To be acquainted with manufacturing methods and processes involved in the production of essential materials.
- (10) To determine available sources of supply and important factors affecting the production rate, stocks on hand, and similar questions bearing on quantities available.
- (11) To initiate measures to stimulate the production of those essential materials in which a shortage might occur.
- (12) To secure information as to stocks, production, and consumption from persons, companies, societies or others interested."

2. Interpretation of contemplated organization, policies and activities of the Commodities Division of the Planning Branch in war.

a. Transition Period. The following summary of existing legislation and presidential authority is brought to your attention, because it provides an adequate basis for action during any period when war is imminent and has made possible the execution of adequate plans to bridge the gap in that uncertain period between peace and war.

(1) Existing legislation and presidential authority.

(a) War Powers of Congress. These are powers arising from expressed or implied constitutional grants and are in addition to the fairly well defined powers of peace. The creation of a sovereign state by the Constitution of the United States within itself

is authority for all acts necessary to "preserve, protect and defend the sovereignty thus created". In congress lies the power to declare war and the power to declare war also "involves power to prosecute it by all means and in any manner in which war may be legitimately prosecuted".

(b) War Powers of the President. Such powers are of two types and are contained in two separate legal entities incidental first to the office of the President as the executive head of the United States and second, by virtue of the President's position as Commander-in-Chief of the Army and the Navy.

Law of eminent domain. This law is based upon the inherent power of a sovereign state in the acquisition of any property within its jurisdiction for the public good subject to the constitutional limitation providing "due legal process and just compensation". The acquisition of private property by the Executive without statutory authority is modified by the law of necessity.

The law of necessity. This is an implied power conferred upon the sovereign state by that part of the Constitution which provides for national defense and is the fundamental principle of preservation.

The Council of National Defense. The Act of August 29, 1916 (39 Stat. 649) created the Council of National Defense and it was used during the World War to initiate the control measures later developed under the War Industries Board.

Section 1361 of the Act of August 29, 1916 (39 Stat. 604, 645) This Act is the authority for the President through the Secretary of War, in an emergency, to take possession and assume control of any system or systems of transportation and utilize the same.

Section 120, National Defense Act (U.S.C. 50, 80). In this Act broad powers are conferred upon the President in war to place compulsory orders for the procurement of such products and materials as may be required.

Act of March 4, 1917 (50 Stat. 82) is permanent legislation with regard to procurement of war material and confers upon the Navy the same authority as Section 120 of the National Defense Act confers upon the Army.

Acts of April 11, 1918 (40 Stat. 241, 518), July 2, 1917, July 9, 1918 confer certain war powers upon the President with respect to the exercise of eminent domain in the acquisition of property for the production of lumber.

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Public Law No. 835 - 74th Congress (H.R. 8555) approved June 29, 1936 gives the Government authority to take, purchase, or use certain vessels for national defense.

The Federal Power Act, August 6, 1935 empowers this commission in time of war to employ temporary connections of facilities, generation, delivery and interchange as necessity may require.

b. Period when war is established.

(1) Presidential Proclamation. A proclamation by the President is contemplated at the beginning of war, creating among other agencies a War Resources Administration. In this proclamation administrator of the above agency is to be appointed, also authority for the administrator to appoint the personnel required. The Administrator of War Resources is charged with the mobilization and utilization of the material resources of the Nation for the purpose of the national defense. This should express the seriousness of the situation giving instructions with regard to curtailment and conservation of specifically named raw materials and assure the civilian population that their needs will be provided, it will discourage trading in those commodities and suggest freezing of stocks, by Executive order it will forbid the exportation of critical and strategic raw materials.

(2) Proposed Legislation. The additional legislation considered necessary to meet the needs of industrial mobilization and to effect the most efficient employment of the plan is

- a. "A bill making available to the President the material resources of the Nation."
- b. "A bill authorizing the establishment of a bureau of Marine War Risk Insurance."

In general, the authority in the World War was somewhat similar but not comparable to that proposed for future emergency and embraced the Naval Emergency Fund Act, the Emergency Shipping Fund Act, the Food and Fuel Control Act, the Trading with the Enemy Act, the Espionage Act, etc. The bill provided for in the Industrial Mobilization Plan carries under its titles, "Industrial Management Provisions", "War Resources Control", "Securities Exchange Provisions", "War Finance Control", and general provisions for enforcement. Stated briefly this section gives extensive powers to the President for the control of all material resources of the Nation by fixing prices, freezing stocks, closing or controlling exchanges, licensing, requisitioning, rationing, price fixing, and priorities. Because of the importance of this legislation as an adequate basis for commodity control the following extract is quoted from the plan

"WAR RESOURCES CONTROL; POWERS OF PRESIDENT"

"Whenever the President, upon a finding of fact to such effect, shall deem such action to be necessary to the maintenance of the military or naval establishment or the effective operation of the military forces or the maintenance of the national interest during the period this Act is in effect, he shall have power and authority as follows

(a) With respect to any product, foodstuff material, real property, or right declared by him essential for the national security and defense in the prosecution of war, to fix and establish just and reasonable maximum, minimum, or absolute prices or rates or rentals at which such product, foodstuff, material, commodity, real property, or right may be bought, sold, rented, or otherwise contracted for, whether such transaction be with the Government or between persons of the civilian population or between any other parties whatsoever;

(b) To close any commodity exchange,

(c) To publish rules and regulations with the force and effect of law for the government of such commodity exchanges as are not closed, which rules and regulations may include, among other things, the regulation of the prices or parities at which commodities may be sold; the establishment of priorities and rationing in favor of purchasers or users most vitally linked with the successful prosecution of war, the limitation or fixation of fees, commissions, or other charges collected by such commodity exchanges or their agents for any service whatsoever, the elimination of short, long, future, and marginal selling and hedging and speculation of all types and varieties whatsoever,

(d) To prohibit the publication of prices quoted on commodities sold or formerly sold on commodity exchanges and to prescribe and prohibit the delivery or transmission for delivery through the mails or by telegraph, telephone, wireless, or other form of communication, of such prices or of any quotation or report of the price of or contracts or sales made of commodities sold or formerly sold on such exchanges,

(e) To requisition the physical plant or place occupied by any commodity exchange or such part of such plant or place, together with such elevators, warehouses, and other marketing facilities wherever located, including private telegraph and telephone wires, as he may require, and to requisition all stores or supplies of any such commodities held by any person,

(f) To limit the sale of any commodity to the Government, and to establish allocations, quotas, and priorities for sales to

itself and others, either at the time of such sale or in advance of such sale;

(g) To resell any commodity purchased by the Government, and to establish allocations, quotas, and priorities among purchasers and users in favor of those most vitally linked with the successful prosecution of war,

(h) To fix and establish the order or preference to be observed by any manufacturer, producer, dealer, distributor, carrier, public utility, or other person whatsoever, in manufacturing, producing, filling existing or future contracts for, complying with orders or requisitions for, transporting, distributing, or delivering of any product, foodstuff, material, commodity, real estate, or right;

(i) To regulate, limit, or prohibit the purchase, sale, use, IMPORT, EXPORT, * transportation, manufacture, or distribution of any product, foodstuff, material, commodity, real estate, or right,

(j) From time to time, whenever he shall find it essential to license the production, manufacture, sale, storage, distribution, or transportation of any product, foodstuff, material, commodity, real property, or right in order to carry into effect any of the purposes of this act to the successful prosecution of war, and shall publicly so announce, it shall be unlawful for any person, after the date fixed in such announcement, to engage in or carry on any business as enumerated in this section, unless he shall secure and hold a license pursuant to this section,

(k) To issue such licenses as are provided by subsection (j) of this section to fix the conditions of such licenses, and to prescribe requirements for systems of accounts and auditing of accounts to be kept by licensees, submission of reports by them with or without oath or affirmation, and the entry and inspection by the President's duly authorized agents of the places of business of licensees. The President may order the revocation of the license of any licensee who fails to comply with any condition of or in a license, or who fails to observe any price, rate, or priority fixed or established pursuant to this title, or who fails to perform or comply with any contract, requisition, or requirement of the United States or any official thereof acting pursuant to authority granted

* This change is to broaden the activities referred to, including those relating to importing and exporting of materials.

by this title, or otherwise fails to comply with the provisions contained in such license,

(l) To requisition and take possession of any product, foodstuff, materials, commodity, real property, or right, and on such terms as he may deem advisable to sell or otherwise dispose of such product, foodstuff, material, commodity, real property, or right,

(m) To promulgate and enforce rules and regulations against waste, destruction, hoarding, speculation, and profiteering with respect to any product, foodstuff, material, commodity, real property, or right, or to limit the use of the same to war purposes;

(n) To regroup, redistribute, or reassign duties and functions of procurement of war supplies for the military and naval establishments.

(o) In the event of emergency, or in the event that inefficiency, labor dispute, or inability to agree on rates or terms of public contracts or any other cause has impaired or delayed the usefulness of any technical, industrial, or manufacturing plant or establishment to the successful prosecution of war, to requisition the physical establishment or resources of such plant or establishment or any part thereof and operate it under such rules and regulations as he may deem proper in the circumstances, and with such personnel as he may deem suitable to best subserve the interests of the nation in successful prosecution of war."

(3) Enforcement Measures. The Industrial Mobilization Plan has included in Appendix VII certain enforcement measures which appear under the Price Control Administration. They are included to complete the picture of the action contemplated in time of war, as follows --

"When the voluntary cooperation of the public and the producers cannot be enlisted in the enforcement of the commission's rulings it has recourse to the following alternative actions through appropriate control agencies

- (1) Use of the priority function.
- (2) Revocation of licenses.
- (3) Rationing.
- (4) Prosecution of violators.
- (5) Commandeering and requisitioning of facilities and commodities."

(4) War Resources Administration. The problem at this stage of development has become well defined. It has been shown that during the preceding period when war was imminent there was in exist-

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ence the necessary legislative and presidential authority to put into operation a definite plan to meet our needs, with the necessary organization ready for action in the form of the Army and Navy Munitions Board, and it was only necessary to appoint an administrator to begin operations. It is also apparent that with the Army and Navy Munitions Board and the War Resources Administration similarly organized the formation of the latter is greatly simplified. If we assume in order to create a proper background for our period of actual warfare that during the transition period the proper representatives of industry having the greatest need for strategic materials have been informed that war is imminent and that certain raw materials upon which they rely will be difficult or impossible to obtain in the desired amounts. The industrialists upon receipt of the information have undertaken the importation of as much material as the situation warrants. This has strengthened our position without the expenditure of funds at that particular phase and it is common knowledge that government agencies have always been rendered powerless immediately prior to the declaration of war upon the assumption that so doing might possibly avert war. Let us assume further that the transition period has been utilized to effect necessary legislation and presidential proclamations. Irrespective of the time involved, be it fifteen days or three months, there has been in operation a control agency, namely the Army and Navy Munitions Board, and out of this initial phase has been developed a superagency which we may call the War Resources Administration organized for effective control.

(5) Commodities Division, Planning Branch. During this transition period the Commodities Division of the Planning Branch has undertaken its representation on the Army and Navy Munitions Board. As now organized there is a committee made up of representatives of the interested supply arms and services for each commodity or commodity group. This staff, let us say, has been augmented with Reserve personnel. If we admit that this background fairly represents existing conditions at the end of the transition period, we are now in a position to extend the analysis of procurement planning to the period of operation under a War Resources Administration. It is proposed when strict control is necessary at the beginning of war to issue warrants which will state the amount of each department (Army and Navy) of a given commodity set aside entirely by warrant from the "existing stocks" and make this immediately available to the supply arm or service (or Bureau) for use in its manufacturing problem. This does not assign a definite amount of a strategic raw material for a given project, but places at the disposal of the Chief of the Supply Arm or Service, as nearly as possible, his first three months' requirement. The Chief of the Supply Arm or Service in turn issues subwarrants against his allotment to each manufacturer interested, each warrant listing the location and amount of the commodity under consideration. This method affords the desired flexibility to the Chief of the Supply Arm or Service, per-

mitting him to shift stocks wherever needed, avoids competition and promotes efficiency. In regard to the exact time warrants will be issued, the exact period is relatively unimportant provided the action is prompt.

The projection of plans and control measures for raw materials in too great detail is not only inadvisable but dangerous. The purpose of any study in peace time is to present in detail all pertinent data in regard to the material or commodity under discussion. It should suggest control measures and be of such a character that it can be utilized in any situation by intelligent individuals familiar with the problem. The War Resources Administration will have all such data furnished through the Commodities Division of the Army and Navy Munitions Board. All questions involving allocation, priorities, etc. should be settled by that Board and presented after coordination to the War Resources Administration. The Commodities Divisions of the War and the Navy Departments will coordinate their own activities through the commodity committees of their respective departments. It is believed that the organizations described have ample authority under the methods indicated to perform their functions to the best advantage and accomplish the mission of The Assistant Secretary of War under the National Defense Act.