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MATERIALS ALLOCATION AND PRIORITIES

24 February 1948

COLONEL HOFFER: During the war there were shortages of materials in the United States and at times those shortages led to serious delays in production. Sometimes materials went to the wrong people and sometimes there just was not enough to go around. Time and energy were spent hunting for materials rather than upon production. As a result the regulation of materials became a necessity.

We are very fortunate today in having a speaker who not only helped to write the regulations for control of materials but subsequently sold the idea of these regulations to industry and helped administer them. Since the war he has been studying the problem of materials control. I take great pleasure in presenting Mr. Groce of the Munitions Board to the College. Mr. Groce.

MR. GROCE: Thank you, Colonel Hoefler. Good afternoon, ladies and gentlemen.

During the days just before and after Pearl Harbor there appeared on the office walls and desks of many WPB executives a motto or slogan which read substantially as follows: "In time of emergency it is better to do any intelligent thing quickly than to search hesitatingly for the ideal." When the desperate urgency of the situation created by our national unpreparedness, both militarily and industrially, is considered, there can be little quarrel with the philosophy which found expression in this slogan.

The executive staff of WPB had to establish policies and make far-reaching policy decisions without adequate information or experience on which to base them and without adequate personnel, both in number and kinds, to carry out these policies and decisions under conditions of almost intolerable pressure from inside and outside the agency, coupled with the necessity for the utmost speed. At the same time and in the same atmosphere, ways and means had to be devised to get adequate information on which to base intelligent policy decisions, and equally important, to execute those decisions once they were made.

Under such circumstances, it is little to be wondered at that some of the actions taken by the WPB, particularly during the early stages of the war, represented improvisations, expedients--often caused by internal organizational or personality conflicts--piecemeal experiments not far removed from sheer trial and error, measures frankly exploratory in nature designed to provide basic data necessary for more adequate and intelligent planning and control, or palliatives designed to remedy specific conditions as they became so critical that the symptoms could no longer be ignored.

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Only when the proposed programs of the various claimants have been received and accepted or modified in the light of realistic estimates of the anticipated supply of limiting materials or products (including components and subassemblies), and only when a feasible balanced national production schedule has been determined and expressed in terms of the relative importance of each segment, with stated quantities to be delivered over specified time periods, can the control system take hold to see that this schedule is met.

In fulfilling its over-all function of meeting the national production schedule, the control system must be successful in reaching a number of more detailed objectives. Some of these are:

1. To insure balanced production of essential items;
2. To speed conversion from peace to wartime use of facilities, and to insure the distribution of machine tools and other equipment for the most efficient use of available resources, including labor and management "know-how;"
3. To see that the total allocation or apportionment of each scarce material in each time period is in balance with the total probable supply of that material for that period;
4. To carry this through so that there is a balance in the amounts of different and complementary supplies available to each permitted user in each period;
5. To prevent leakages of scarce materials into excessive inventories and to prevent the immobilization of inventories while, at the same time, assuring the maintenance of minimum and reasonably balanced working inventories;
6. To insure that approved users of scarce items do, in fact, get them at the places and times required;
7. To conserve vital resources, by encouraging the preparation of specifications and contract placement by procuring agencies in such a way as to make the most of the Nation's production potential, by curtailing or prohibiting less essential or nonessential uses of scarce materials and the manufacture of less essential or nonessential products;
8. To provide channels through which adequate current information can be collected and made available to those responsible for making policy decisions.

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Finally, when Pearl Harbor forced upon the Nation the realization of the necessity for all-out war production, the OPM gave way to the War Production Board in January of 1942. With complete and clearly defined authority vested in its Chairman, the WPB proceeded rapidly to organize for the job ahead. Its initial primary preoccupation was with the complex problem of eliminating or curtailing unessential or less essential production and construction and converting or diverting these facilities to war production. It immediately strengthened and expanded its industry divisions and charged them with the responsibility of expanding, maintaining, or reducing the rates of production of products under their jurisdiction and with general supervision over the operations of these industries. In general, the WPB adhered to the end to the basic framework of organization established during its first few months of operation.

The origin of the preference rating system has been commented upon because, although subsequent actions of the WPB replaced the use of the preference rating in certain areas, supplemented it in others, or prescribed special rules for its use in certain cases, the preference rating continued throughout the emergency period to be the single most pervasive priority device used to indicate to suppliers the order in which to make deliveries to their customers.

The preference rating system needs very little comment. It started out under the ANMB Priorities Committee with rating bands of A-1 to A-10. By mid 1941 ANMB had introduced a top series of ratings, A-1-A through A-1-K. By mid 1942 this had been replaced by still another rating series, the AA-1 series, identified as AA-1 to AA-5. Those three changes in the priorities rating system almost speak for themselves in terms of degree of inflation that happened during the period of the preference rating system's beginnings and early development.

It also seems quite curious at this point to see that in the early days ten rating bands were used. When the A-1-A series was introduced there were eleven top rating bands. It seems difficult to believe that the relative urgencies could possibly have had any meaning. It is little to be wondered at that ratings become so highly inflated by leap-frogging and concentration in high-rating bands that it was necessary three times to start all over again and issue a new set. By the time the AA series became effective, however, in mid 1942, the situation was fairly well under control through other methods, and that series held to the end of the war.

I won't spend any time on the priorities regulations or the CMP regulations, except to say that the regulations set down general ground rules for the operation of the priority system.

After the preference rating, the next series to make its appearance was the P order series. When it was determined that it was impossible in many

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established to effect this transition is it possible to see in proper perspective the reasons and reasoning behind the step by step evolution of the "priorities and allocation system" and to condone many actions which in retrospect seem to be serious errors of omission or commission.

When the President established the National Defense Advisory Council in May 1940, Europe had been at war something over eight months; Belgium has just surrendered, and the evacuation at Dunkirk had begun. The seriousness of the situation abroad was obvious, but although we were committed to a program of assistance to those nations resisting the Nazis, there was little thought or expectation that we would become actively involved in the war; and further, there was a considerable body of isolationist thinking in this country at that time, both inside and outside of Congress. There was in existence no legislation which gave the President authority to compel the acceptance and filling of "defense" contracts ahead of or in preference to other orders, and he was apparently unwilling to approach a still peace-minded Congress with a request for the broad powers which were subsequently granted in the War Powers Acts. The NDAC was, therefore, as its name implies, a purely advisory body which relied on consultation, negotiation, and persuasion, but with no authority to enforce the carrying out of its decisions.

From its inception, the most important problem confronting the NDAC was that of material supplies and priorities. Even at that early date there was clear indications of actual or impending shortages of certain raw materials, particularly metals, to fill all needs of the rapidly expanding defense program without serious interference with commercial, export, and civilian demands for these materials. Since the earliest shortages made themselves felt in the supply of raw materials and the facilities for producing them, rather than in facilities and capacity for fabricating these materials into products, it was natural that the initial efforts of the NDAC should be primarily directed toward solving this problem. This resulted in the early setting up of the nucleus of what later became the Materials Branches and Divisions charged with the job of increasing the production and supervising the distribution of their respective materials.

These Materials Divisions--well established operating units--had developed firm policy opinions and operating philosophies, and had devised and put into effect a great number of individual methods of controlling the distribution and uses of their materials many months before the appearance of "Industry" or "Product" Branches and Divisions in the organization. In fact, it was not until September 1941 that "Industry Branches" as such, appeared in the OPM organizational setup, and it was not until the spring of 1942 under WPB that those branches began to operate with any degree of effectiveness.

It is extremely important to note this point of what might be called the "organizational timing" of WPB and its predecessor agencies, for it

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Therefore, summary tabulations derived from PRP applications, not only could offer no reliable data as to the impact on materials supply of the production at any given level of any product or group of products (a basic necessity for intelligent production planning), but also the use of this information was misleading and in fact might actually be dangerous.

PRP had two other basic flaws which should be mentioned, although both were relatively minor and could have been corrected. The first of these was the handling of MRO. Materials for MRO by the applicant were included with production materials which made it impossible to determine from the application the use, inventory, or requirements of materials, either for MRO or for incorporation into products, but only for both. Thus statistical tabulations of PRP applications or authorizations gave no clue as to MRO requirements of the listed metals or products by industry and to the extent that these items were used or needed for MRO, gave inaccurate data on production requirements.

The other flaw related to the "coverage" of PRP. The plan did not cover all uses or users of the listed metals or products, an essential of any over-all plan for controlling the distribution of key items, as was recognized in the case of the three controlled materials (steel, copper, and aluminum) under CMP. In defining those who were required to file PRP applications certain areas were **excepted**. In addition to users of less than \$5,000 worth of the listed metals per quarter who, although their aggregate "take" was relatively small, constituted a numerically large group, the following exceptions were made: (1) transportation; (2) furnishing of heat, light, power or gas; (3) quarrying; (4) production, refining, transportation, distribution or marketing of petroleum or associated hydrocarbons; (5) communications; (6) sewerage or drainage; (7) construction; (8) sales by distributors or warehouses. It is at once apparent that the total of these excepted areas represented a substantial percentage of the total uses of the listed metals. In these areas other methods or combinations of methods were used to control the distribution and use of materials, so that while PRP was set up to take care of the production needs of the larger manufacturers of products, it was by no means the sole method of controlling the quantitative distribution of the listed items.

A final and most important point with regard to the operation of PRP must be brought out before passing on to CMP. It was stated earlier in this discussion that had PRP been permitted to operate as it was designed to operate it would have offered from the point of view of the manufacturer an almost ideal solution to the problem of wartime material procurement--but in the actual operation of PRP even this result was largely negated.

Partly because of its very comprehensiveness, since its universal use involved the crossing of many lines of authority, PRP became the object of contention and antagonism on the part of certain sections of the Armed

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The term "production scheduling" sometimes caused confusion because what WPB did mostly was delivery scheduling rather than production scheduling. There were various methods used to actually set the pattern of delivery and freeze schedules to determine in which order the deliveries should be made. These methods varied all the way from a manufacturer filing a schedule and freezing it at that point, filing his schedule and having to wait until WPB told him whether or not it was all right, through the most rigid, where an individual authorization had to be obtained before a delivery could be made of a particular kind of product.

During the whole of 1942 the major problems confronting the WPB was that of controlling and directing the flow of materials and products in such a way as to meet, as closely as possible, the national production schedule within the total available supply of limiting items. It was conceded that in order to accomplish this, some over-all instrument was needed which would furnish the necessary information to the Requirements Committee on which to base its program determinations and which would also act to effect the distribution of materials in accordance with these determinations. The Production Requirements Plan was the only over-all plan in effect at that time and seemed to give considerable promise of being adaptable to perform these two functions.

PRP was announced in December 1941, just a few days before Pearl Harbor, to become effective in the first quarter of 1942. The Plan continued in operation for six calendar quarters, the first two (January through June 1942) on a voluntary basis, that is, industry was not required to operate under it; the next three (June 1942 through March 1943) on a mandatory basis, when all "Class I producers" as defined in the plan were required to file PRP applications; and a final transition quarter (April through June 1943), when PRP operated concurrently with its successor the Controlled Materials Plan (CMP).

In any discussion of PRP it is usually stated that applications were made on a plant basis. Since a basic concept of the plan was to authorize the receipt of materials in such a way as to maintain minimum inventories or to force the reduction of excessive inventories, applications were required on the basis of the smallest breakdown of the applicant's operations which raw material inventories permitted. Although, generally speaking, this resulted in one application per plant, it was not uncommon in cases of large multi-product plants to receive several applications covering the operation of a single plant. Conversely, where several plants operated from a centrally controlled inventory, there were applications which covered more than one plant. Thus a "PRP unit" was usually, though not necessarily, a single plant.

In addition to performing the functions outlined above with respect to the WPB, the plan was designed to furnish to the applicant a "complete

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The problem of balanced production material flow was attacked through three new approaches: (1) The "authorized production schedule" which could not be exceeded, but for which in all cases, sufficient controlled materials had to be allotted at the time an order or contract was placed; (2) the "claimant agency allotment" principle under which claimant agencies, other than WPB industry divisions, made allotments to "prime consumers" for the production of certain products in which they had primary interest; and (3) the "vertical allotment" principle under which the requirements of a prime consumer for controlled materials included the requirements of his secondary consumers for controlled materials needed by them to make the components and subassemblies required to meet the production schedule of the prime consumer, and allotments made to prime consumers included quantities which they, in turn, distributed among their secondary consumers. Under CMP a "prime consumer" was defined as "any person who receives an allotment of controlled material from a claimant agency, either directly, or through an office of such agency," and a "secondary consumer" was defined as "any person who receives an allotment of controlled material from a prime consumer or another secondary consumer." In general, these terms had the same meaning as "prime" and "subcontractor" but were chosen as being more descriptive of all users of controlled materials.

The authorized production schedule which went with allotments was designed to prevent the initial placing of contracts unless there was assurance that there were materials available to fill them, and to secure integrated production by setting quantitative ceilings by time periods at each production level. It should be noted at this point, however, that there were many instances of allotments made by WPB industry divisions where no specific production schedules were assigned, since for these products as high a level of production as possible was needed and desired, but the rate was governed entirely by the quantities of controlled materials which could be made available. In these cases the "authorized production schedule" was interpreted to mean the maximum quantities which could be made with the material allotted, thus giving the manufacturer an opportunity to use his ingenuity in producing as much as possible through substitution, simplification, standardization, or any other methods.

The claimant agency allotment principle was designed to give control of production to the claimant agency having the entire or primary responsibility for the product being produced. It was also designed to place squarely on the shoulders of the claimant agency responsibility for the most efficient use of the allotment which was given to the agency by the Requirements Committee.

The vertical allotment principle was designed to give the total impact of the production of any product or class of products on material supply and to insure consistency in bills of materials, in requirements, and in allotments.

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that A products were in general the combat items or specialized items made for and purchased by the Services. However, the Services had considerable interest in purchasing large quantities of other things so they wanted to allot for those products as well. It was not a question of whether it was a component of another product or whether it was a specialized component or a common component, but it was a struggle for control of and jurisdiction over the production of that product.

Officially announced 2 November 1942, to go into partial operation during the second quarter of 1943 and into full operation beginning with the third quarter, CMP had the great advantage of more than six months time after it was announced and before it became fully effective to get ready for its administration, to eliminate "bugs" in the plan as originally released, to prepare and issue regulations, operating instructions, and procedures, to train agency personnel and to inform industry in its functions and responsibilities under the plan. This time for preparation was invaluable in getting CMP off to a flying start and was responsible to a considerable degree for its early effective operation.

CMP was the last over-all plan used to control production and material distribution in World War II. That it was the best possible plan, is, of course, open to question; that it did the job, there can be no doubt. CMP worked. By dint of hard work, sweat, and general superlative cooperation on the part of all concerned, it was made to work. Thank you.

COLONEL HOEFFER: On behalf of the College, thank you very much, Mr. Groce.

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