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PROCUREMENT PROBLEMS IN BUSANDA  
12 February 1946.

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GENERAL ARMSTRONG:

Gentlemen, the next speaker today is a classmate of the distinguished director of the Department of Instruction, Captain Worthington. I am going to ask to him to introduce his classmate to the Industrial College this morning.

CAPTAIN WORTHINGTON:

Captain Austin graduated near the top of his class in 1924 from the United States Naval Academy. He was regimental commander during his graduation year there. He served a short time in the Navy after graduation, and then returned to civil life, where he practiced law as patent attorney in Philadelphia. Returning to the Navy in the spring of 1942, he became officer in charge of the General Operations Section of the Purchases Division, Bureau of Supplies and Accounts. He is now the officer in charge of that division. He will speak to us on the subject of "Procurement Problems in the Bureau of Supplies and Accounts." Gentlemen, Captain Austin.

CAPTAIN AUSTIN:

General Armstrong Captain Worthington and gentlemen: It is quite a pleasant experience to be introduced by a classmate whom I have not seen since we graduated from the Naval Academy twenty years ago. As I look over the audience I see others of my Naval Academy classmates. I also see some representatives of the Supply Corps which ties in with another part of my past.

When I first received this subject from General Armstrong I mulled over the problem of the conventional introductory anecdote. The more I thought the more disturbed I became, because I have been unable to find an anecdote that is pertinent. That led me to the unwelcome conclusion that what I had to say had no humor and that it was no joking matter. So I come before you without the conventional introductory anecdote. Yet I cannot believe that there is no humor in administration, because I found plenty of humor as I went along. As a matter of fact, from time to time I reminded all my officers that the one thing we had to preserve at all times in the struggling mass which made up our division was a sense of humor. Incidentally, I want to keep within my time, because I am aware of the very sensible old rule that no souls are saved after the first twenty minutes.

By way of preface to my remarks on the subject of procurement problems in the Bureau of Supplies and Accounts, I would like to express my enthusiastic interest in your efforts to gather up the experience gained in wartime procurement while such experience is reasonably fresh in the minds of the participants. We all had many problems during the war which puzzled us at the time and some of which still puzzle us because our solutions under the pressure of dire necessity could only be provisional solutions. Now is the time to try to profit from those problems and possibly from the solutions improvised under great pressure. In the preparation of this paper I have had a slight feeling of holding a post-mortem except that the subject is emphatically not dead. The Bureau of Supplies and Accounts has for some time been digesting its wartime experience in readjusting itself to peacetime organization, and one of our great concerns is to preserve the vitality and accumulated experience of the organization through the peace years ahead. To further this objective a program was started over six months ago to obtain reports recording the war experiences of certain of our officers about to return to inactive duty. These reports have been of considerable value in developing the subject assigned me today.

The peacetime root of our problems--I would like now to turn our attention more specifically to our subject. Our procurement problems to a considerable extent were rooted in the long-established system of peacetime buying with which you are all familiar. You will recall that peacetime buying was based on highly formal bidding which allowed practically no discretion. This procedure, of course, was so mechanical that it can be called buying only in the sense of an analogy. Under peacetime buying procedures, military purchasing officers were forced to achieve delivery of material of the proper quality at the time and place required, despite a maze of legislative and procedural restrictions which severely limited their exercise of judgment. The predominating objective was the obtaining of bids from as many suppliers as possible with award to the lowest bidder in strict compliance with the law. Under these controls, buying was readily adapted to standardized and mechanical processes, and was adequately handled by a small staff skilled in these clerical processes. Special knowledge and experience were not essential because the system itself provided by law the standards on which an award was based. It was required that awards be made to the lowest bidder offering materials in accordance with specifications, and a premium could not be paid for materials which exceeded specifications, even though such an award would result in a better purchase.

The performance of the purely mechanical steps required by the statutory provisions governing formal bidding obviously could not train personnel for buying by negotiation, and when it became apparent that buying by negotiation was essential to the war effort, there was no trained buying personnel and no organizational experience to draw on. The developing and building of a purchasing organization from a peacetime strength of less than 100 to 1,000 required pioneering and administrative adventuring which is more suitable to peacetimes than wartimes.

After the declaration of the National Emergency by the President in September of 1939, it soon became clear that procurement would have to be geared for war and that the peacetime methods of formalized bidding were hopelessly unsuited for war conditions. This was our first big problem. The first step in changing the form of procurement was taken in 1940 when Congress enacted Public Law 671 of 28 June 1940 which among other things modified the advertising-competitive-bid-requirement, and conferred authority to "negotiate" in a limited field of purchases. The Act provided that negotiation should be resorted to when the peacetime method proved a detriment to the interest of the Government. The purpose was to broaden and supplement, but not to displace, the conventional method. The procedural machinery for purchasing in the Bureau of Supplies and Accounts, being set up for methodical sealed bidding processes, was not suited to individually negotiated deals. This negotiating authority with its attendant changes was augmented and expanded by further enactments.

Next, came the all-important--to a discussion of purchasing-- First War Powers Act of December 1941 as implemented by Executive Order 9001 which revolutionized Navy purchasing for the duration of the war. Into purchasing vernacular came a host of new terms--Letters of Intent, Advance Payments, Priorities, Cost-plus-a-fixed-fee contracts, Farming Out, Commandeering, and others. Each represented a new activity and hence new problems calling for drastic changes in organization and methods.

Then followed Directive No. 2 of 3 March 1942 from the War Production Board which made negotiation the general rule and outlined the basic policies to govern negotiated buying. Where before, a choice of negotiation or competitive bidding was authorized, negotiation was now required for all Navy purchasing. The directive set forth the definite wartime basis for the awarding of contracts: first, that delivery must be within the time required by the war program; secondly, that the widest use of smaller facilities be made in order to conserve the larger facilities for the more difficult contracts; and finally, that the least amount of additional machinery and equipment be required for the performance of the contract.

The Directive, as amended 10 October 1942, laid emphasis on labor supply and directed that contracts not be placed in labor shortage areas. Through the War Manpower Commission the labor areas of the country were classified into four grades depending on the congestion of industry in the area. All things being equal, it was required that contracts be placed in the least congested area, unless the goods could not be obtained elsewhere. During the latter half of 1943 the West Coast Labor Shortage became so critical that governmental procurement agencies were instructed to award no contracts whatsoever to manufacturers in that area.

Now it has been said that coming events cast their shadows before them. There is ground for the suggestion that wartime procurement was foreshadowed in 1940 with the first commandeering Act which was amplified by a second Act in 1941. In commandeering, the basic idea was to

get the goods instantly and pay fair and just compensation therefor. This was plain negotiation of a fair and reasonable price which was to become the wartime buying technique. In this activity there was also coordination with the Army to avoid conflict between the services in the mad rush for materials. Thus while the Purchase Division was gearing up, procurement was being directed to scraping up all possible war materials by the judicious use of the commandeering power. It was frequently useful to bring an attitude of reasonableness to a recalcitrant supplier without actual exercise of the power.

With the peacetime methods of competitive bidding inadequate and the volume of awards increasing tremendously, it was imperative that the operational machinery and organization of the Purchase Division be streamlined and changed to carry the responsibilities of discretion, speed and volume now imposed on it. May I emphasize that this necessary developmental work had to be done under the most trying conditions. The work of the Division had to go on contemporaneously with the planning. The newly recruited workers had no experience. It was like building a house with untrained builders with the family living on the ground.

Now I would like to emphasize that our basic problem which was never lost sight of was getting the materials fast, and all other problems and their solutions were subordinate. The magnitude of this problem staggers the imagination. I would like to read you a few figures.\*

A wartime purchasing organization takes form-- Out of all of this tremendous change and attendant confusion came a basic principle for guiding the development of the new war organization out of its embryonic chaos toward the efficient discharge of its responsibilities. The basic idea which evolved as the cornerstone of the new organization envisaged the recruitment of experienced and capable buyer specialists from industry who would be supported by a highly organized operational division to carry the burden of administration and routine operations. In the practical development of this basic idea, the management within the struggling new division focused its attention on three main objectives: (1) to improve the quality of negotiated purchasing in accordance with the newly established policies, (2) to reduce the time for completing a procurement, and (3) to improve the quality of the purchase document. The first problem was the immediate recruitment of highly capable commodity buyers experienced in specialized fields.

\* The total number of contracts awarded by the Navy Department, Marine Corps and Coast Guard during the fiscal years of 1942, 1943 and 1944 was 103,351, representing \$49,430,939,165. Of this total, 75,513 contracts, representing \$14,819,369,520, were awarded by the Bureau of Supplies and Accounts. In addition there was the field which was part of the Bureau's responsibility. The Bureau sent to the field during the first year of the war two-thirds of the requisitions received and these are not included in the figures given above. But of this more later.

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And the next problem was the development of an organization which would coordinate the specialist buyers and handle all operational matters to the fullest extent possible. Thus, the solution of the problem of negotiated buying led to a problem of recruitment of buyers and a problem of organizational development, which in turn developed other problems. Our administrative evolution was just a series of problems and hastily improvised solutions without interruption of the day's work.

First, in regard to the recruitment problem. In its great need for the services of specialists of wide experience in commercial fields the Supply Corps went into commercial business circles and carefully recruited the purchasing agents and executives who by background and ability were ably fitted to do this involved and voluminous purchasing job for the Navy. The importance of the job called for the best business brains of the purchasing field, and so recruiting was done from top-flight positions in industry. Men were recruited whose salaries, in the main, were written in five figures, and commissioned as Supply Officers at the rank of lieutenants (jg), lieutenants, and lieutenant commanders.

The typical specialist buyer commissioned in the Supply Corps was 35 to 40 years old, and he had had an average of 20 years' business experience. Generally he had drastically curtailed his own personal income and standard of living to serve in the Navy, and in most cases he was specifically selected for the billet rather than seeking it of his own accord. He was widely and favorably--in many cases prominently--known in the field of the commodity he was assigned to buy for the Navy, and therefore had contacts with and the confidence of the manufacturers. Through his personal business acquaintances as a civilian, he formed a natural and direct, though unofficial, channel for expeditious liaison with the paralleling commodity experts (likewise brought in from civilian life) within WPB, OEW, OPA and other governmental coordinating agencies. In short he was well equipped by ability and background to meet the demands of the Navy's wartime procurement task. In many instances these buyers were beyond the draft and were pure volunteers.

Before discussing examples showing the work of the specialist buyers in specific commodity fields, it is perhaps desirable to outline briefly for you the organization of the division in its wartime dress and after its shake-down period. It must be remembered that it was the operational support that enabled the buyers' specialized experience to be fully focused on buying problems. There was a clear-cut distinction made between buying and the paper processing incident to the completion of a procurement. The buying was done in the Commodity Purchase Branch; the paper processing by the Office Operations Branch.

The personnel of the Commodity Purchase Branch was largely officers, the specialist buyers. The organizational setting or support for these buying specialists making up the Commodity Purchase Branch was the Office Operations Branch, which included most of the personnel except the buyers and was given the responsibility for the paper processing, the drafting of the contracts and all possible operational matters incident to the procurement. The organization and

operation of the Office Operations Branch is particularly interesting as an application to the task of purchasing of modern mass-production technique and functionalization. As specialization was developed in the various buying fields, so too specialization was developed in the task of relieving buyers of all administrative and detailed paper work attendant to contracting and procurement. In addition to the responsibility for paper processing, this Branch also planned the coordination of all sections of the division and worked constantly toward the simplification of procedures to reduce the time necessary to complete procurements.

The organization of the Operations Branch brings out another guiding principle which helped control the work of the division. Responsibilities and authorities of the major section heads were generally delineated according to three stages of the buying operation--precontracting, contracting, and post-contracting. By this device, jurisdictional difficulties and conflicts were virtually eliminated which permitted full delegation of authority to the major section heads. There remained, of course, the occasional problem of clashing personalities resulting from a disinclination or inability of some individuals to keep their eyes in the boat even when the boat is clearly defined.

Operational problems--This would seem an appropriate place to refer to a delicate, but rather fundamental, problem in a large organization; namely, the disciplinary enforcement of production standards of time and volume. In a large division highly organized along streamlined principles, there is necessarily a considerable amount of anonymity in the performance of functions. Consequently, when certain operating figures are produced by one section to the discredit of other sections, there is a pronounced tendency for discredited sections to attack the accuracy of the data presented by anonymous personnel in another section. This causes bad feeling which may result in open hostility between sections.

A number of attempts were made to establish a central control section having the confidence of the division in order that it in turn might be used to establish and enforce standards of production. This operational problem seriously threatened the unity and working harmony in the division again and again. The problem was finally solved by the development and establishment of the organizational philosophy that the bookkeeping responsibility should be placed entirely with the administrative responsibility of the sections with summarized reports to the information control center and executive head. In this way operating sections were held accountable on their own records for their performance. If these records were questionable, they were examined through the administrative officer responsible. Such an arrangement gave considerable moral strength to the establishment and maintenance of operating standards because officers were held accountable for the discharge of their own responsibilities on the standard of their own records. There was no alibi.

One of the big problems of procurement in the Bureau of Supplies and Accounts will now have become apparent to all of you. I refer

to the leviathan made up of a hastily recruited mass of unindoctrinated workers. The key civil servants of the peacetime Purchase Division were forced to spread their experience very thinly over this seething turmoil. The problem of organization was immediate, pressing and overwhelming. It became clear that war necessity called for a rigorous application of the basic principles of military organization adjusted to some extent to the tolerance of a great mass of workers with no military background. Among the instruments which were helpful in bringing order out of chaos was the idea of "completed staff work" which forced initiative down the line and developed the technique of military delegation. The familiar trilogy of "organize, deputize and supervise" became a guide in the development of the division. The organization soon became clarified into an executive head with a relatively few major section heads reporting to the executive head.

The separation of developmental staff work from the operational work was an effective instrumentality for improving the organization without interfering with its daily work. Complicated problems referred to the executive head were immediately turned over to the staff assistants, who were not harrassed with daily operational problems and responsibilities. In this way improvements were made rapidly and with a minimum of disruption.

The executive control over the operation was further extended by means of daily statistical reports which were scrupulously kept to a minimum. On the basis of these simple statistical figures standards were set for the division and performance or lack of performance on these standards was daily reflected in the office of the executive head. The operating sections soon became indoctrinated with the standard they were expected to maintain and the realization that an explanation was in order when the standard was not maintained.

As the administrative strength of the awkward adolescent organization developed, it became understood that there were two unforgivable sins for those charged with responsibility down the line: (1) to be in trouble and not know it, and (2) to be in trouble because of failure to act. Errors of action were regarded more sympathetically. The head of the Purchase Division emphasized the basic policy that grief must be brought front and center and sections must liquidate backlogs at all costs. The division began to settle down when the operational officers became imbued with the realization that initiative and assumption of responsibility were demanded of them, and that a simple standard of performance was set for them, that is, work on today's work today.

The field--The field purchase organization of the Bureau of Supplies and Accounts includes some 75 separate purchasing activities of varying size, and these are widely scattered throughout the continental United States. During the first year of the war these field purchasing activities handled about two-thirds of the total requisitions received by the bureau but generally speaking, these field purchases included items of a less critical nature and smaller size than those procured in the bureau. In certain selected field agencies purchases of a specialized character were unified and centered. For example, Portsmouth

was the center for electrical fittings; New York, a center for textiles; and Mechanicsburg, a center for internal combustion engine spare parts.

With the development of a wartime purchase policy of negotiation and the greatly increasing purchasing burdens, the problem of assisting the overburdened and unindoctrinated field purchasing activities became pressing. A field unit was developed in the Purchase Division and staffed with able officers headed by a carefully picked regular officer who could interpret the new policies to the field in the light of their peacetime practices. Personal contact with the field by officers in the field unit of the bureau was pushed. Purchasing officers from field units were brought into the bureau on temporary orders for indoctrination.

Due to the emergency development of numerous purchasing activities in the field, it was not surprising to find instances of competition between naval activities to obtain scarce items in areas where the market supply was limited. A program of consolidation of purchasing power in fewer activities in such areas was launched. This program culminated in a definition of the responsibilities and authority of these widely scattered field units which was incorporated in the Supplies and Accounts Manual. It became policy to limit the activities which would be designated to make the larger and more difficult procurements, in order that the complications of the larger procurements would be centered in as few activities as possible. Large naval purchasing offices with unlimited authority to purchase (subject of course to clearances of the Secretary of the Navy) were established at Chicago, Los Angeles and Pearl Harbor in addition to the peacetime establishments at New York and San Francisco.

There was also a problem in indoctrinating and leading the field to a full use of the wartime discretionary authority. The field unit took aggressive steps to forward the policy that all purchasing activities exist only to provide a service for those for whom they are designated to buy and that in order to achieve this objective, the wartime discretionary authority must be fully exercised.

This field unit in its development provided a service to these numerous field activities by which these field activities could obtain necessary information promptly from this bureau, other bureaus of the Navy Department, and the civilian war agencies, such as WPB, OPA, etc. The field activities soon developed the habit of looking to the field unit as the contact section in the bureau for assistance of any kind. This field unit also undertook the responsibility of forwarding the flow of directives, circular letters, and memoranda to the field activities in a controlled manner, finally undertaking a complete rewrite of the procurement portions of the peacetime Manual, which was thankfully received in the field. In the development of this service unit for the field it was necessary not only to accustom the field to look to this unit for answers, but also to accustom the numerous bureau activities to cooperate in supplying this unit promptly with needed answers for forwarding to the field.

Contract problems in procurement--Thus far we have studied the problem of procurement in its organizational and strictly purchasing aspects. There is a third aspect which presented special kinds of problems. I refer to the contract or legal problems incident to procurement. Effective administration requires the development of the technique of efficiently using counsel. As a purely administrative expedient, it is imperative that all cases presenting difficult legal complications be screened out of the normal flow of standardized cases. Cases requiring hand-tailored jobs cannot be efficiently handled in a highly systematized contract drafting operation. Further, buyers cannot be expected to keep up on the last minute refinements in the interpretation of directives and statutes. This tremendously important function of counseling a gigantic administrative procurement program without interference with administrative responsibilities was worked out smoothly with the Office of Counsel, and much credit is due the Office of Counsel for assisting administration by intelligent and informed advice on difficult cases.

The major legal problems relating to procurement, fall into three main categories: (1) the problem of adapting the prewar contract document and the general provisions therein to wartime procurement policies; (2) the problem of varying the general provisions and drafting additional provisions where the conditions of a particular industry, particular company or particular transaction made special provisions necessary; and (3) the problem of drafting special contracts in the case of transactions of a special nature which fell outside the scope of the usual contract for supplies. Such transactions included the procurement of stevedoring services, tugboat services, services to operate barracks, services to transport household effects, services to perform shop work and the like.

In the autumn of 1942, the standard contractual document was a form last revised in 1936. There were also supplementary sheets to the basic form providing clauses to fit special situations. The resulting contract was often a mosaic of provisions and a pretty cumbersome document. Through trial and error, the present documents were evolved.

Finally, a standard form of supply contract was adopted, the provisions being the same whether it was used after sealed bidding or after negotiations. This was slightly changed for procurements of electronics, petroleum and coal, each of which products presented special problems. A purchase order for smaller procurements was adopted and a simple memorandum of purchase for small procurements of shelf items was also put into use. The format of the documents and arrangement of the provisions were designed so that the administrative burden of assembling, drafting and duplicating the document was as light as possible. Likewise, the form and substance of bid proposals were studied in connection with contract forms to bring the bid and contract into line. The use of the simple purchase order was extended up to transactions under \$100,000 which reduced the operational problem considerably.

The work of the specialist buyers.--Let us now turn to specific commodity fields to observe the work of the specialist buyers in solving their diverse buying problems. It should be borne in mind that one of the basic operational principles was to focus the special experience of the individual buyers on buying problems, unhindered by administrative responsibilities. The procurement and purchasing of clothing and textiles provide an excellent example of the efficient use of the experience of specialist buyers.

The responsibility of the clothing buyers was best defined by the naval procurement policy which holds that clothing and textiles, no less than arms and ammunition, are critical materials of war. The primary clothing problem of the Bureau of Supplies and Accounts was to outfit a great two-ocean fleet of which the complement was increased from 325,000 men in 1941 to over 3.5 million men and women in 1945. During the first eighteen months of the war the average clothing expenditure was nine million dollars weekly. The Navy's intensive recruiting program had to be matched with an equally extensive clothing procurement. Replacement and reserve stocks had to follow the fleet all over the world, battle losses had to be covered, and equipment as well as men had to be protected from every extreme of climate. Some special problems were the uniforming of a Woman's Reserve, the changing of officers' work uniforms from khaki to slate grey--even supplying the red pom-poms for the caps of the seamen of the Fighting Free French. In short, the Bureau of Supplies and Accounts was responsible for the procurement of all clothing and textiles for the United States Navy, except the fabrics physically incorporated in aircraft or emergency items which were purchased by yards or stations.

To do the job, buyers were recruited from the commercial clothing field for their specific assignments and were men well and favorably known in the clothing and textile industries. They spoke the language of the industry and were sympathetic to the problems of the manufacturers. They were familiar with commercial procedures and had a thorough knowledge of materials and supplies--all of which combined to give the Navy an expeditious clothing procurement job. Clothing purchasing was beset with the problem of too few suppliers. This condition was aggravated in the clothing industry because of labor shrinkage into higher paid industries. Therefore, more suppliers had to be found and manufacturers had to be persuaded and guided to submit bids on items entirely foreign to their production lines. Though cooperative and willing, these manufacturers lacked the experience to submit a reasonable bid on an untried product. So there again the soundness of the commodity purchasing system was demonstrated. The specialist buyers, familiar with market prices and manufacturing costs and in numerous cases known to the suppliers, were able to gain and hold the confidence of scores of manufacturers who were asked to launch into new productions to meet the Navy's wartime needs.

An example of the development of a completely new article calling for the experience of the specialist buyer in working with suppliers in his field is found in the mosquito glove. This special type of glove was called for in order to combat the ravages of malaria among the

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forces in the swamps and jungles. With the exception of the hands, the body could be fairly well protected during working periods, so the need for a glove, cool and yet protective, became apparent. If too protective, the men would discard them in the hot climates; if too ventilated, they would not afford worth-while protection. In conjunction with the Bureau of Medicine and Surgery, the Bureau of Supplies and Accounts made a study of mosquito bites and found that the palms of the hands being calloused and the first joints of the fingers being rather fleshless, were seldom bitten. Thus a glove with little or no palm, no finger or thumb tips would be cool, practical for work and still protective. No glove manufacturer had ever contrived to produce such an item. The pattern was presented to the Special Clothing Board and to quote the consensus of opinion it was "a crazy looking thing." However, the board sanctioned an experimental purchase of the item. In the swamps of Louisiana the gloves were tried out. Serious study and reports showed that the men would wear them, that in two minutes time over 300 mosquitoes would light on an ungloved hand against an average of five on a hand wearing the experimental glove. Inestimable protection was provided by the use of the glove. Thus from the prosaic job of a glove procurement came comfort, protection and life-saving results.

Further evidence of the operating efficiency of the clothing buyers was the fact that eighteen months after the declaration of war, the replacement rate was ready to be revised downward and the clothing program for stock reserves and recruiting needs was cleared up to 1944. In fact, the clothing procurement program was sufficiently in hand to begin leveling off the flow of orders. Manufacturers who in many cases completely sacrificed their civilian items to meet Navy needs were permitted to regain some of their lost peacetime markets.

The field of fuel shows a mammoth task which was attacked by specialized buying. The Bureau of Supplies and Accounts acts as purchasing agent for petroleum requirements for the entire naval establishment including the U. S. Coast Guard and the Marine Corps. It also functions in this respect for certain products (lube oils) for many other governmental departments and agencies. Further, as a wartime expedient, the Bureau of Supplies and Accounts was charged with the task of supplying both the army and navy requirements in certain theaters where the Navy was assigned petroleum logistic responsibility. The requirements of the Allies under the Lend-Lease Plan, the British Empire, Training Program, and Ferry Commands in Canada, Newfoundland and Bermuda were also supplied by Bureau of Supplies and Accounts. The petroleum products purchased by the bureau include practically every product refined or produced by the petroleum industry.

To carry this tremendous purchasing burden a group of officers was recruited from both major and independent suppliers in the petroleum industry. Each man brought to the section knowledge of the petroleum industry that proved to be of inestimable value. Specific assignments were given those men so that their purchasing activities would be confined to specialized classifications of petroleum, such as lubricating

oil, fuel oils and motor gasolines, aviation gasolines, asphalts, and specialty products such as rust preventives, insecticides, and blending agents. This was done so that the officers not only would become thoroughly familiar with Navy specifications but also to place them in a better position to negotiate with the industry and apply a full knowledge of competitive prices and conditions in their particular fields throughout the country.

An interesting example of a different form of the development of the principle of specialist buying is found in the field of subsistence. In this field specialist buying was worked out through coordination with the Army. It will be interesting to review briefly the transition in this field from peacetime methods to specialist buying through coordination with the Army.

The Navy's present operating program for the procurement of subsistence supplies was developed during the course of World War II with the view of procuring by efficient and orderly methods the increased quantities of food required. Methods that had proved efficient and orderly in peacetime were not satisfactory for wartime conditions which were marked by large requirements for military and other governmental agencies and by increased demand for food by domestic consumers. The most important change from the peacetime program of navy procurement of subsistence supplies was the coordination of purchases with the Army.

At the commencement of the war it became apparent that the rapidly increasing demands of the Armed Services and Lend-Lease for food would require a high degree of coordination by the several governmental agencies. In order, therefore, to make the most efficient use of national food resources the procurement program was shifted from the prewar system of strictly navy purchases to a program whereby the procurement of most of the important items was made by the Army for the Navy. This program served to eliminate competition between the Services and insured that the requirements of both Services were met.

The first step in the coordinated program was taken in March 1942 when an agreement was reached by the Armed Services whereby the procurement of canned fruits and vegetables for the Army, Navy, Marine Corps, Coast Guard and Veterans Administration would be effected by the Army. Under this program the requirements for the several services showing quantities and delivery points were submitted to the Quartermaster General. These were consolidated and turned over to Army Field Buying Offices in New York, Chicago and San Francisco. With quantities and destination points for the vendor's use in hand, the field buying offices negotiated contracts with the canners and allocated various lots to meet the needs of the claimant agencies. Under this method of coordinated procurement the inspection by the inspectors of the Department of Agriculture was under the administration of the army purchasing officers. Purchases were made with a view to minimizing transportation hauls and the requirements of the several agencies were procured in the type of packing that was required by them.

The experience with the procurement of canned fruits and vegetables was so successful that the procurement of all major items of nonperishable subsistence supplies was by mutual agreement placed in the hands of the Army. The procurement of perishables was also coordinated with the Army, and by the end of the war, the Navy was procuring 90 percent of its subsistence requirements through the coordinated program with the Army.

I would like to say parenthetically that the success achieved in this field where the Army and Navy were buying identical materials should not mislead us in appraising the possible benefits of coordinated buying where the materials required by the Services are not identical. Obviously, coordinated buying of widely dissimilar goods required by the Services presents a problem which is different from the buying of identical goods like food.

In supplying the needs of the war, steel and steel alloys were vital, fundamental materials, required in unprecedented quantities. And even though the operations of the steel industry were immense and highly developed, they were not keyed to the wartime volume. Hence, in the early days of the war the problem in steel procurement was not so much one of raw materials as it was of facilities.

Open End Contracts, used to a limited extent prior to the war in the procurement of several types of materials, were increased in number extensively, and advantageously used in the purchase of basic steel products. Specialized steel buyers familiar with the industry were essential in this development. These contracts, which were based on an estimated six to nine months requirement, were drawn up with stated prices but with escalator clauses in the advent of increased prices in the steel industry. The output was approximated, and the requisitioning activity drew directly on the producers by the issuance of Mill Orders. Thus, as more Open End Contracts became effective, inversely the ratio of the work load within the entire bureau was decreased and activities within the purchasing sections tended to become mechanized and largely administrative. By midyear 1943 approximately 400,000 tons of steel per month were being supplied to the Navy on Open End Contracts, and the routine steel requisitions filled in the division on the conventional type of navy contract had declined to ten or fifteen percent of the total volume. Open End Contracts were particularly suited to steel procurement because of the general uniformity of prices established by the industry itself on the basing point system. Placement of awards on steel products was more frequently determined by delivery time or destination rather than by price. For example, on a procurement of nails for the Naval Ammunition Depot at Hastings, Nebraska, it was determined that two manufacturers were geographically favorable, one in Pueblo, Colorado, and the other in Kansas City, Missouri. Since prices were practically the same, the CMP commitments and delivery were the factors that determined which of the two plants received the award. Because the specialist buyer understood how his industry did business, he was able to streamline the contracting system.

About midyear 1943, the steel electrodes, an item which had been causing considerable procurement difficulty on a price issue, were

assigned to the ferrous metals buyers. The electrode manufacturers of the country had developed a zone system under which they quoted delivery prices. Under this system the Navy was not only prevented from taking advantage of low-price bids, but was frequently required to pay excessive freight charges. The steel buyers, knowing production problems and costs, visited the plants, investigated materials and processes, studied price breakdowns and other pertinent facts, and using the Price Adjustment Board as their weapon, overrode the zoning system, and within a period of six months effected a saving to the Navy on stainless and carbon electrodes of \$500,000. The specialized buyer knew his industry.

Lumber procurement presented many peculiar and difficult features. On 1 April 1943 the purchasing responsibility for all hardwoods, for both Army and Navy, was placed in the Bureau of Supplies and Accounts. Purchasing of all softwoods for all services was given to the Army.

At the same time the Construction Division of the Corps of Engineers of the Army was the over-all authority for all lumber procurements and was known as the Central Procuring Agency. The officer in charge of lumber purchasing in the bureau became Navy Lumber Coordinator and served as navy representative at the Central Procuring Agency.

As was possible with other materials, lumber sources could not be developed through plant conversions, new dyes, or other innovations. Nature alone governed the quantity available. However, the estimated shortage of five billion feet for combined civilian and military requirements was not due to an insufficiency of standing timber, or even facilities, but of manpower to get the logs out of the woods and into the saw mills. The plight of the lumber supplier, particularly the smaller operators who were vitally needed to reach the quota, was the subject of detailed Congressional hearings in May 1943. It was reported that 4,000 out of an estimated 30,000 saw mills in the Nation were completely shut down, just when their production was needed most; that these operators were beset by (1) a shortage of available manpower, especially in their logging camps, (2) the loss of what labor they had to other industries that could and would pay higher wages, and (3) the necessity of paying higher costs than they had to pay at the time the ceiling prices on lumber were set. These difficulties were intensified by the fact that lumbering, like farming, is one of the most decentralized industries of the country, with some 20,000 large and small producers operating from Maine to Puget Sound. It took the experience of specialist lumber buyers to coordinate this industry for war production. Therefore to meet these procurement problems, just as men who knew manufacturing were recruited for industrial procurements, so too top-notch men of the lumber field, who knew timber from long experience, who understood its peculiar problems, and who had personal contacts with lumber suppliers, were commissioned in the Supply Corps.

Another problem peculiar to Lumber and Building Materials procurement was the change in the types of material required as the war progressed. At the outset immense quantities of lumber were requisitioned.

for the erection of barracks, cantonments and loading docks. While housing requirements for the large recruiting programs were being fulfilled, supply lines grew, and some 500 million feet a month of dunnage quality lumber was required to meet the demand for export crating and packing. The total lumber procurement for the Navy from the beginning of the war to midyear 1943 was three and one-half billion feet.

There are many other examples showing the work of the specialist buyer; but I see that my time is up, and I do not want to abuse your hospitality. I hope that out of this mass of material which I have prepared you will get suggestions for possible further study. In closing I would like to express again my enthusiastic interest in your program and its farsighted policy.

GENERAL ARMSTRONG:

Captain Austin, you spoke of the problem of getting personnel. Did you have a list of those buyers in the office of Busanda that you could go to and use prior to M-day, or did you have to develop that list and find those people afterward?

CAPTAIN AUSTIN:

We had to find them afterward.

GENERAL ARMSTRONG:

What are you going to do in the future?

CAPTAIN AUSTIN:

In the future we hope that we will have strong contacts with industry; and as we develop in our Corps we will have officers who know industry. We hope we will be able to have officer specialists who know what people to get from industry. Then we will have a list so we can do as you suggest -- when we go to general quarters in an emergency. I am glad you brought that up, because that is one of the things that needs to be done in preparation for future emergencies.

GENERAL ARMSTRONG:

Do you think people like that would be willing to come in for short courses at the Industrial College for a period of three months or so?

CAPTAIN AUSTIN:

That is possible. But I am not sure that they would all be able to find time to respond. You might do it by making them reserve officers.

GENERAL ARMSTRONG:

I am thinking not only of reserve officers, but of civilians coming in for a short time.

CAPTAIN AUSTIN:

That is what I have in mind. I think that possibly there would be more of them who would do it if they were attracted as reserve officers. We hope to solve that problem by having officers on regular duty who can interest those people, who will know who they are and at least will know where to go. Now, how far they can go in inducing them to give some time for taking courses, as you suggest, is an open question in my mind. I think after World War I we had a very difficult time interesting people in any naval reserve work at all.

GENERAL ARMSTRONG:

Do you think that a more decentralized organization of Busanda would accomplish a greater degree of effective relationship between industry and the Navy on this front?

CAPTAIN AUSTIN:

One of the disadvantages to any proposed decentralization is that we would have one activity bidding against another, one organization bidding against another in the same line of procurement. To our minds it is better to keep purchasing centralized, at least to a very controlled extent.

But again I feel that, if we have officers, as we hope to have, who are specialists in these various fields, they will be able to carry to a limited extent this decentralization to industry. They will, as I say, know who the people in particular industries are. We hope to have officers who might spend some time with industry itself, because one problem, of course, is to understand the problems of industry when it comes to mobilizing our resources.

GENERAL ARMSTRONG:

We are recommending that that become a part of our postwar policy. At least, hundreds of officers in the Army are going to industry. There is no reason why that should not be done in the Navy.

Gentlemen, any questions?

A STUDENT:

In connection with the employment of these specialist buyers did you have occasion to use any personal service contracts?

CAPTAIN AUSTIN:

We did employ some on personal service contracts, but that was very seldom. We had a few. I do not recall who were on personal service contracts, but the great majority of them were in uniform and part of our organization.

A STUDENT:

Certain Austin, people like that can be employed without commissioning them as officers. For instance, I might state that I employed some fifty buyers in Chicago on personal service contracts.

CAPTAIN AUSTIN:

We did, too. In specific cases we had men who were under personal service contracts for various reasons. But generally our men were in uniform.

I think one reason for that was that we could get men of very high caliber who would take a small salary such as that which would be paid them as an officer, in consideration of wearing the uniform. I think they felt it to be a considerable recompense to be a part of the military organization which got the supplies to the front.

GENERAL ARMSTRONG:

Are there any other questions? If not, Captain Austin, I want to thank you and congratulate you for a most excellent talk.

(14 March 1946--200)