DETERMINATION AND REVIEW OF REQUIREMENTS IN THE DEPARTMENT OF DEFENSE

29 November 1954

989

CONTENTS

Page

INTRODUCTION--Rear Admiral W. McL. Hague, USN, Commandant, Industrial College of the Armed Forces 1

SPEAKER--Honorable Thomas P. Pike, Assistant Secretary of Defense (Supply and Logistics) 2

GENERAL DISCUSSION 16

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INDUSTRIAL COLLEGE OF THE ARMED FORCES

Washington, D. C.

Honorable Thomas P. Pike, Assistant Secretary of Defense (Supply and Logistics), was born in Los Angeles, California, 12 August 1909 and attended Harvard School in that city. He was graduated from Stanford University in 1931 with an A. B. degree in economics. Following graduation, he became associated with the Republic Supply Company of California, oil well and industrial supply jobbers. In April 1938 he left that organization to form the T. P. Pike Drilling Company which he has headed since that time. The company, a profit-sharing organization which is engaged in oil-well-drilling contracting, owns and operates a number of drilling rigs and has operated in California, Wyoming, Texas, and Mexico. He also is Western Trustee of the Council of Profit Sharing Industries, Vice President of the Casualty Insurance Company of California, and a former director of both the Los Angeles Chamber of Commerce and the Merchants and Manufacturer's Association. He has lectured on labor relations at Loyola University. On 29 September 1953 he was appointed Deputy Assistant Secretary of Defense (Supply and Logistics), and on 6 April 1954 he was appointed to his present position by President Eisenhower. This is his first lecture at the Industrial College.

DETERMINATION AND REVIEW OF REQUIREMENTS IN THE DEPARTMENT OF DEFENSE

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ADMIRAL HAGUE: We are very fortunate in having as our speaker the Honorable Thomas P. Pike, Assistant Secretary of Defense (Supply and Logistics).

If there is any one lesson that should have been learned from World War II, it is the lesson that stated the inseparability in this day and age of total war of the civilian and the military effort. However, wartime lessons have a habit of being lost in the piping times of peace and this one, too, might very well have been lost had it not been for the stark unfolding of the intentions of the Communist countries that in turn required strategic plans. Strategic plans required a determination of requirements and it soon became apparent when all these military requirements were totaled that even this fabulously wonderful economy of ours could not support the plans envisaged. In other words we could not have 100 percent safety at all points.

It also became apparent that strategic plans would have to be analyzed, not only to determine the end items needed, but to determine just what components went into these end items, and, further than that, what would be the demand on fundamental resources to produce the components.

That is one of the simple chores that Mr. Pike's office has today. It is the office that applies the feasibility tests to strategic plans to insure that the strategic plans do not become the equivalent of an edifice built on a foundation of quicksand.

He has other responsibilities. He has the overall policy direction of procurement, transportation, storage, and so forth, of the supplies of the military services. But this is no Five and Ten Cent or General Motors' operation. I think it is apparent to all of us. We see it expressed in many ways. According to a current item in a reliable morning journal, the value of the Defense Department holdings, including land, buildings, inventory, supplies and equipment, is 155 billion dollars, or one-fifth greater than the total net assets of the 3,444 leading corporations in the United States at the end of 1953.

Mr. Secretary, I doubt that, aside from the Defense Department and a few of the people in the agencies here in Washington that are primarily concerned, in the country at large there is any realization of the complexity and the magnitude of this problem; but I can assure you, sir, that this audience at least will understand that.

It is a great pleasure to present to you the Honorable Thomas P. Pike.

SECRETARY PIKE: Admiral Hague, gentlemen: It is a real pleasure and a distinct privilege to be invited to speak to this distinguished group of the Industrial College of the Armed Forces. I call you distinguished people because your very presence here indicates to me two things: First, that each of you has achieved a record of accomplishment; and, second, that each of you has been sufficiently ambitious to want to increase his own knowledge and add to his own personal self-development. Successful men who do not become self-satisfied are the kind of Americans that I particularly admire. So at the outset I would like to commend and congratulate each one of you for being enrolled in this class.

I understand that this is the eighth lecture in a series of 16. I have had a chance to observe the speeches of the able, experienced, and distinguished people who have addressed you and who are to lecture to you. I wish that I were a big enough man to measure up to this 155 billion dollars total area or the Supply and Logistics requirements area in particular this morning.

Whenever I get on my feet and am required to say a few words about the total responsibilities of my office, I am always reminded of the story about six-year-old Johnny and his mother. It seems Johnny was busily engaged in drawing on a piece of paper. His mother came along and saw he was drawing lines back and forth. When she asked him what these strange combinations of lines were, Johnny replied, "I am drawing a picture of God." His mother said, "How can you draw a picture of God? Nobody knows what God looks like." To which Johnny replied, "They will when I get finished."

Believe me, I approach my assignment this morning with a considerably larger measure of humility and sense of inadequacy than little Johnny did.

Perhaps at the outset, in order to put requirements in proper perspective, it might be helpful if I ran over very quickly the overall responsibilities of the Office of the Assistant Secretary of Defense (Supply and Logistics). I will try to read the top bars of our organization chart, going from left to right.

Chart 1, page 4.--We have divided the organization into five directorates: First, Planning and Review which has as its area of responsibility requirements review and analysis and mobilization planning.

Next, across the line from left to right, comes Procurement and Production Policies, and Petroleum Logistics;

Third, we have our Directorate for Storage, Distribution, and Disposal.

Fourth, our Directorate for Cataloging, Standardization, and Inspection.

Fifth, last but certainly not least, comes Communications and Transportation.

Now we have gratuitously thrown into our charter a couple of other responsibilities. I will name two of them: First, we are charged with seeing to it that small business gets its fair share of the procurement dollar; and, second, we are charged with getting Government out of competition with private business.

So you can see that my directors, my organization, and myself have plenty to keep us busy.

This subject is not one that admits of glamorous treatment. I have tried, without success, to inject some degree of humor into it.

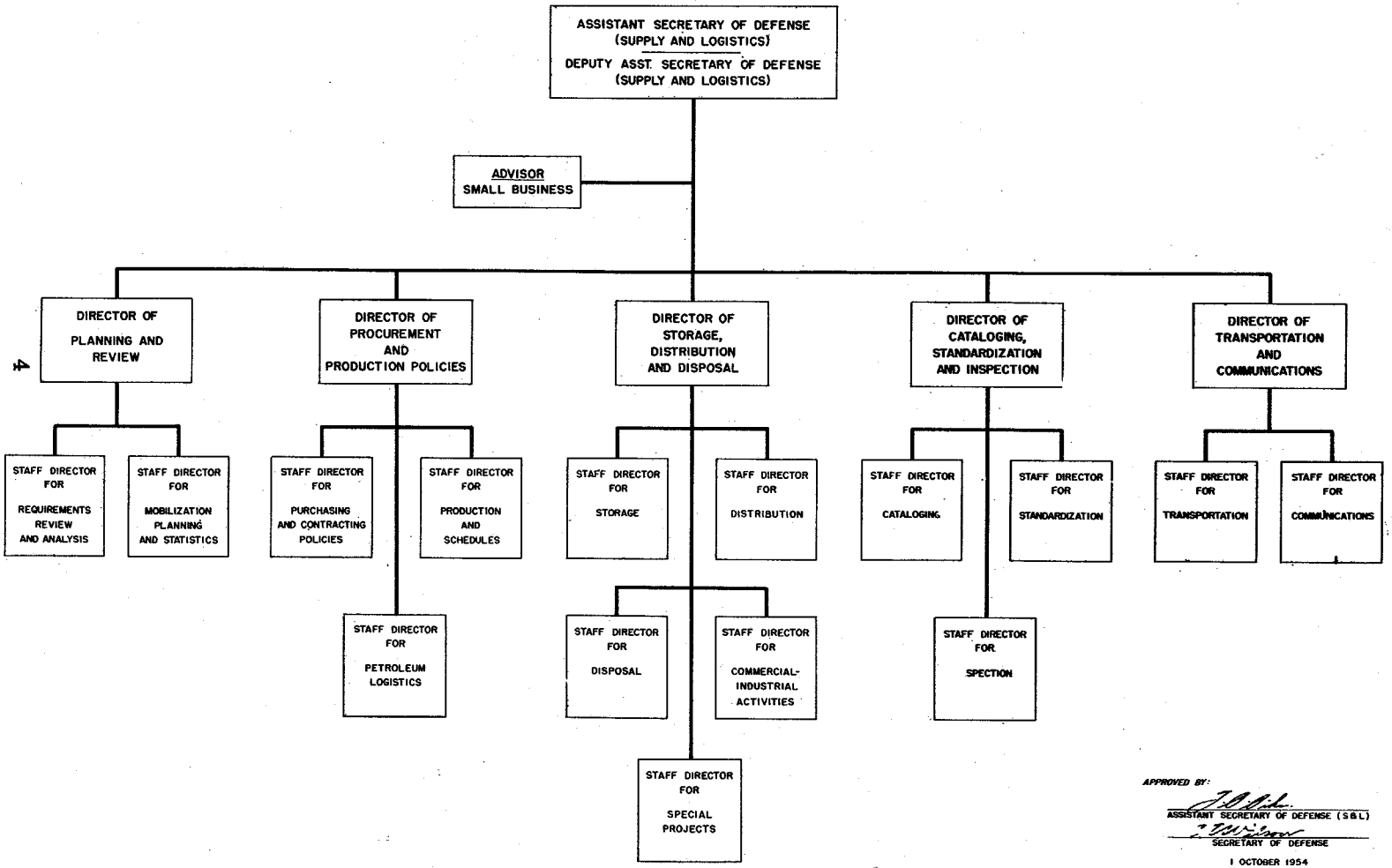
Now to get to the role of the Assistant Secretary of Defense (Supply and Logistics) in the determination and review of requirements in the Department of Defense (DOD). Let us talk very briefly about definitions.

Requirements is a generic term and as you well know, it covers a multitude of things. Fundamentally, it can be applied either to the

CHART 1

OFFICE OF THE SECRETARY OF DEFENSE

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
(SUPPLY AND LOGISTICS)



APPROVED BY:

ASSISTANT SECRETARY OF DEFENSE (S&L)

SECRETARY OF DEFENSE

1 OCTOBER 1954

5594

need for men, money, or materials. Primarily, to Supply and Logistics, it means the need for materials, although we are and must be concerned with the overall relationship among the three.

Basically, our job is to examine into the validity of the requirement; then to correlate the requirement with the ability of the industrial economy to meet the need; and, finally, to measure the rate of progress toward the established goal, taking such action as may be necessary to increase or decrease the program level with the passage of each period of time.

Right here I would like to inject a thought that has already been mentioned by the Admiral and that is simply this: We must never again--I am led to believe and know that this mistake has been made--base our national planning on the assumption that our great American industry can fill all demands that conceivably can be placed on it. We are better prepared industrially now to meet military requirements than we have ever been before. But our review and evaluation of requirements must always be pointed toward the relationship of feasibility to valid need.

Thus we try to visualize requirements not as an abstraction nor as columns of figures upon a piece of paper setting forth in neat rows what we would like to have. Rather, Supply and Logistics attempts to see the planes, guns, and ships in the framework of these questions:

First, what do our Armed Forces really need in the way of materials to perform their role in the execution of our national policies and to fulfill their assigned mission in carrying out national obligations and commitments?

Second, the time-phasing of the requirement--when is it needed?

Third, upon what production basis can the requirements be best obtained?

Fourth, what is our current status in relationship to the goal?

In order to perform an intelligent job, we must first understand the ramifications of the military plan and the military assumptions upon which the requirement is to be based.

As you know, we do not make the plan nor determine the assumptions. That, by law, and rightly so, is the function and responsibility of the Joint Chiefs of Staff (JCS), subject to the approval of the Secretary of Defense and the President. But to make an evaluation of the need we must know the broad military strategic basis upon which that need has been constructed. We are also interested in the correlation of the plan with national policy as set forth in the approved recommendations of the National Security Council (NSC).

Furthermore, experience has taught us that the effect upon requirements of basic differences in planning assumptions far outweighs any detailed item-by-item analysis of factors in requirements computations. For this reason, a mutually agreed-upon joint mid-range war plan is currently a necessity in order to bring the services' planning assumptions into the same ball park and to provide a common basis upon which to review requirements.

Let me digress briefly to say simply that the need for this new joint mid-range plan is recognized by everyone at top level in the DOD. It has been my very interesting job to be able to work on and at this problem in close cooperation with Deputy Secretary Anderson. During the course of working at and on this, it has become my great privilege to get to know Admiral Radford, Chairman of the JCS, and many of his top people. I don't believe that I am talking out of school when I say that we have every reason to hope we will have a new joint mid-range war plan in the very near future.

In turn, it is essential that in formulating a military plan, there be close coordination between those responsible for its development and those responsible for its industrial feasibility. This is necessary so that there may be worked into the plan at the earliest stage the best advice on economic and industrial feasibility that can be given. A military plan prepared in the vacuum of economic and industrial unreality is like a house built on sand. Furthermore, it is a most disheartening process to go through the long cycle of translation into end-item and material requirements only then to discover that some basic assumption or feature of the plan produced an infeasible result. We had one such experience along these lines several years ago.

In addition to examining the relationship of the requirement to the basic plan, Supply and Logistics must concern itself closely with the time-phasing of the requirement. This must be done both for

current requirements and for mobilization requirements. As you gentlemen know, there has been a tendency to divorce mobilization planning from peacetime planning; to look at mobilization needs only on a periodic basis, rather than to consider them as a part of the current problem. We do not believe this separation is realistic.

Thus in order to measure our mobilization production position, we construct mobilization requirements on a time-phased basis. For it is apparent that cumulative production over three or four years at the end point may meet or exceed a cumulated requirement, but the two may not necessarily coincide at the right point in time. For this reason mobilization requirements must always be expressed in time as well as in quantity. Also, time-phasing will show us what the deficit or overage may be and permit us to measure the quantity needed on hand before mobilization.

Similarly, the time-phasing of a current requirement gives us a readiness position at each point in time. It is also a "must" in order to schedule current production and to evaluate properly those schedules to see that what is being purchased is produced when needed, not before or after.

Thirdly, we examine requirements from the standpoint of the production base. Broadly speaking, there are two factors which enter into our ability to fulfill the wartime requirements of our Armed Forces. We must have stocks on hand and we must have productive capacity. Experience has indicated that these two factors must be viewed as a whole. Treating them as alternatives has obvious disadvantages. Large stocks are exceedingly costly to maintain. Many items are subject to rapid obsolescence. In addition we must carry on a realistic program of modernization if we are to keep a strong defense posture. Accordingly, we look at requirements in the light of a proper balancing between stocks and production base.

Under the concept of readiness over a long pull rather than maximum readiness at one point in time, it is necessary to measure requirements against a flexible production base. We accomplish this flexibility by analyzing our requirement and productive capability under two assumptions: First, that the item is in production on the assumed M-day, and, second, that the item is not in production on the assumed M-day. Obviously, for items that require long production lead time, a going or "hot" production line may have a great

advantage over stocking a large percentage of the gross requirement and then shutting down the line.

Lastly, Supply and Logistics examines requirements in the framework of current program status with relationship to ultimate program need. National objectives, strategic concepts, the art of warfare, even individual factors like the ammunition day-of-supply factor are very lively things. They are not static and they do not remain pegged to one spot for long. I can testify from my experience in the Pentagon that there is nothing so permanent as change. And it must ever be this way. For the ability to meet new conditions by new ideas and new concepts is a healthy thing.

The subject of requirements is no exception to the rule. We must continually reexamine requirements in this light. At present we are attempting to devise a system whereby a yearly planning cycle, a yearly requirements computation, and the annual preparation of a budget can be tied together so that all three will be upon a comparable basis.

Let us turn now and examine briefly in the few remaining minutes the mechanics of how we perform our determination and review. There are many types of requirements but generally they can be broken down into three major classes: first, end items--guided missiles, electronics, and ammunition; second, critical components--bearings, turbines, and optical elements; and, last, raw materials--copper, steel, aluminum, titanium.

Because they present different problems in requirements computation, we use slightly differing systems for each major class. I will give you a brief outline of our methods for the determination and review of component and raw material requirements and then treat end-item requirements in a little more detail.

In close conjunction with the military departments and with industry, we first identify those components which experience has taught are likely to be critical. These are the components which may well be the limiting factors in the production of end items. Then, having established a list of these components, we arrange them in order of priority of need and production difficulty. They are then studied on a project basis.

Based upon the approved end-item schedules, the military departments compute the time-phased requirements. These are reviewed in my office. Then, in conjunction with the Office of Defense Mobilization (ODM), the Department of Commerce, and industry, the capacity to produce the component is carefully scrutinized and matched against the requirement. This is a complicated process involving difficult questions of product mix. Also, essential civilian needs must be taken into account. However, the final result is to give us and industry a picture of where we stand and in what areas we may be deficient. Recently, we have completed studies on ship turbines and gears, boilers, and jeweled watch movements. We are in the process of completing studies on antifriction bearings, aircraft instruments, optical elements, tank hull castings, heavy forgings and extrusions, valves, electronic tubes, and many others.

In the area of raw materials, the military departments, using factors obtained from bills of material and industrial sources, translate end-item schedules into the various mill products. We express our raw material requirements in terms of bars and rods, wire and shapes, plate and sheet, and so on. Supply and Logistics furnishes the overall guidance upon which these requirements are computed. Thus we recently determined that raw materials requirements for mobilization would be computed against the end-item production capability or the procurement objective curves, whichever is lower, rather than the end-item requirement curve. The reason for this is obvious. You need raw materials only as fast as you can consume them within your procurement requirement.

I would like to digress again briefly at this point to tell you about an actual case by way of further illustrating this thought. Over a year ago I attended my first meeting of the Defense Mobilization Board. That meeting had up for discussion the question of whether or not we needed a so-called third round of aluminum expansion.

The ODM people had prepared a magnificent presentation based, of course, upon requirements factors which had been supplied them from the DOD. Based upon those premises, our conclusion was very simple and quite obvious, that we needed more aluminum.

However, Deputy Secretary of Defense Roger Kyes was present at that meeting and he changed the whole decision--which I am satisfied was about to have been made--to go ahead and develop a third

round of aluminum expansion, by simply saying that he doubted the validity of the aluminum requirements.

It then became the job of our office to undertake to make another review of aluminum requirements. This we did on a very exhaustive and extensive basis.

When we first looked into this problem, it seemed apparent that there was a tremendous generation of scrap in the aircraft industry that was not being worked back into the system. My director of production, Warren Webster, and his staff director, Ken Turner, took a trip across the country and visited all the aircraft manufacturers and engine manufacturers, and checked with each one of them as to how they computed their bills of materials for aluminum.

To make a long story short, a thorough check on that aluminum requirement was made, with the result that we did not need a third round of aluminum expansion.

After raw material requirements are reviewed in my office, they are transmitted to the ODM. As I have just indicated, it is primarily the function of that agency to match raw materials requirements against the processing capacity necessary for the production of the requirement. Similarly, it is primarily the function of the ODM to establish and take the steps necessary to fulfill the national stockpile objective for basic strategic and critical raw materials. Of course, we are vitally interested in and participate in these determinations. But the execution of the function is the responsibility of the ODM.

Here again I would just like to reemphasize that the DOD has a tremendous responsibility in the proper checking and reviewing of these requirements because these are the figures upon which the ODM bases its decisions, decisions that involve billions of dollars potentially in setting up additional production of materials.

And now finally coming to end-item requirements, we have developed a new management tool which brings together in one form all the necessary data from each of the military departments on a comparable basis. This tool, we call the Materiel Planning Study.

At this point I would like to give very special credit to several men who worked hard and well over many long months in developing

this form. Believe me, it is no easy job to first develop a new form with a new concept and then get it sold to all of the military departments. I would like to single out a few people who did particularly outstanding work in this field. They are all on my staff: Bob Unkrich, Ray Clarke, Don Bradford, and Bill Schaub. We borrowed Bill Schaub from the Bureau of the Budget for a while and he assisted us in doing a fine sales job in getting this form accepted by the military departments.

This Materiel Planning Study gives us a form which can be utilized in many fields. For instance, it has proven useful in the following areas:

1. Supply planning.

2. Procurement and production planning.

3. Facilitating the processing of demand and supply information between the using and purchasing agencies of the military departments.

4. Supply Availability Studies, including those relating to capability and feasibility.

5. Establishment of relationships between current and mobilization programs.

6. Determination of mobilization readiness.

7. Budget and funding information.

The Materiel Planning Study will provide a most effective means for a coordinated requirements review procedure by the Office of the Secretary of Defense (OSD). It will also permit us to focus attention on problem areas in the materiel supply systems.

The arithmetic of the Materiel Planning Study or DD Form-764, as it is more commonly known, is fairly simple. It involves a cumulative statement of requirements over several periods of time, a cumulative projection of assets over the same periods of time, and a measurement of the resultant status of supply at each point in time.

This could be much more clearly explained with the chart which we have and if you are interested, we will be glad to show the chart to you during the question period.

Thus we have a statement of where we expect to be over the entire time of our planning cycle. With knowledge of where we will be on the basis of present and planned actions, we are in a position to determine any corrective measures that seem necessary.

One of the more valuable features of the Materiel Planning Study is that it provides for a uniform presentation of demand and supply data on a total DOD basis. Through provision of a common language, a common set of definitions, common measuring dates and common concepts, the DOD has, for the first time, a means by which it and the military departments can, on a common basis, evaluate the effectiveness of policies, plans and programs, and progress being made. These features are succeeding in eliminating some misunderstandings between the OSD and the departments because those concerned are now all talking the same language. And as your colleague understands you and you understand him, you both move ahead. This cooperative effort and understanding is particularly important in this sensitive area.

So far we have been discussing a piece of paper, a format if you will, that has a primary mission of defining problems. What is our approach to reviewing the problems so defined?

Ours is a positive approach in which we seek to be constructive. We are not concerned with the minute details and mathematical results that are reflected in the requirements computations prepared by the military departments. Rather, we seek to provide the military departments with quantitative and qualitative standards of performance, planning factors, and guiding criteria that comprise the overall basis for the requirements. This does not mean that we will accept all interpretations and statements of requirements that come forward, but it does mean that, where we reject, we will strive to provide pertinent and helpful correctives.

I should perhaps add a word there. As you all know, each Assistant Secretary of Defense--and my office is no exception--does not have any line authority. We are merely staff advisers to the Secretary of Defense. I particularly have a sense that the one way in which we are going to be able to accomplish our job and achieve our mission most effectively is to do it through proper human relationships, get together, give and take with our counterparts in the military departments. I have had a magnificent degree of cooperation

extended me by the Assistant Secretaries for materiel in the various military departments. In turn I have urged my directors to set up meetings with their counterparts in the military departments. I think the success achieved to date can be traced primarily to the working together of intelligent people, all seeking to do a good job.

The scope of our review can be illustrated by a few of the experiences we have encountered in a recent analysis undertaken in connection with the translation of the fiscal year 1956 individual service plans into requirements. I have listed here six points. I do not claim these are completely new and unknown to you gentlemen, but they are offered as illustrations of the type of things in which we are interested.

1. Close coordination of the basic planning assumptions used by the military departments is a necessity. Much has been accomplished in this area. Much still remains to be done. As I said earlier, a joint mid-range plan would be of great assistance. I am confident that such a plan will be approved in the not too distant future.

2. Greater attention needs to be paid to imbalance in the attainment of mobilization reserves. Some items have attained and even substantially exceeded their mobilization reserve materiel requirement. Others are short. We feel one of the real benefits to be obtained from the Materiel Planning Study is the fact that it provides a quick method for highlighting this type of situation.

3. Pipeline factors cannot be treated upon a generalized basis. They vary item by item and must be developed to reflect such variations.

4. The factors which go to establish materiel consumption rates are a most profitable area upon which to bring to bear our united constructive thinking. Together with the services, we plan constructive effort on this front. Two examples come readily to mind. The ammunition day-of-supply factors are most important; so are the spare aircraft engine factors.

5. Forecasts of production capability after M-day must be the best and most current we can obtain. I have in mind one large electronics item in short supply, where the production capability estimate was based upon a 1951 survey.

6. A realistic procedure for the transfer of information between the using and purchasing agencies must be established. For peacetime requirements this is not an insurmountable problem but for proper management of a production base and the establishment of mobilization reserves, the timely exchange of requirements and production data is essential. The procedure for accomplishing this interchange has been developed and is now under review in the departments. It is encouraging to note that each new requirements call brings about an improvement in this area.

Any review that does not foresee problems in the making would be deficient in itself. Although all of the problems may not be discernible at this time, one that is arising involves the maintenance of a minimum production base in many important industries, such as aircraft production. The problem is most acute in industries where the needs for military production greatly exceed normal peacetime output and yet the items are essential to a full mobilization. Solution of this problem requires, first, a determination of what size the production base should be to assure readiness in the event of mobilization; and, second, how to maintain this base in the face of the leveling of our peacetime Armed Forces.

Again, in certain of the major equipment areas, such as guided missiles, our review seeks to point up the direction in which we are moving and to determine whether obsolescence is affecting operational requirements or missile production.

At this point I would like to mention something I should have stated at the outset, that is, in our whole approach to this question, Supply and Logistics does not attempt to deal with tens of thousands of items of supply in the military supply system. Rather, to make the job an accomplishable one, we have limited our study to a field of some 500 major items. This group of 500 items accounts for approximately 70 percent of the total budget involved.

Now from the DD-764 forms that have come to our office to date, a partial list of our findings points up a variety of problems relating to the validity of combat replacement factors, continued production of items not required, replacement of standard equipment, integration of air support with ground forces, mobilization reserve interim stockage objectives, post M-day aid to allies, and matters of comparable import.

These are the major matters with which the Supply and Logistics review of requirements is concerned. We counsel with the military departments continually on these problems because we understand thoroughly that it is within the departments themselves that the solution lies. This is a joint responsibility and a joint function. If we, from our particular vantage point of seeing the entire panorama, can offer some assistance in solving problems which concern all who are striving to produce a stronger defense, then we feel we have earned our place and performed our function as the staff assistant of the Secretary of Defense.

No discussion of requirements would be complete without emphasis on the importance of logistics guidance. Our review therefore encompasses a thorough examination of the logistics guidance that has been issued at all levels of Government, by the NSC, the JCS, other OSD staff offices, departmental headquarters offices, and the computing elements of the departments, including the technical services of the Army, the Navy bureaus, the Quartermaster General of the Marine Corps, and the Air Materiel Command. The purpose of this review is to assure that the guidance available to the computer is both adequate and sufficiently complete for requirements determination, and to assure the proper and uniform interpretation of such guidance and instructions at all levels within the DOD.

Gentlemen, you have been very kind and attentive to my remarks on a subject that is difficult to make glamorous or horribly attractive. Before closing, I would like to turn briefly to an entirely different note. I want to say to you people that I have been in Washington here for about 14 months, that I have been tremendously impressed by the men it has been my good fortune to meet, work with, and come in contact with. You frequently hear people talk about the sacrifices men from industry make in accepting Government appointments. Believe me, I don't consider my service here a sacrifice in any sense of the word. I am already an infinitely richer person as a result of an increased understanding of our national problems, and perhaps more important, the first-hand knowledge that our leaders in this country are working hard towards twin goals of peace and prosperity. I have also observed an abundant recognition among Administration leaders that spiritual resources must be developed and strengthened if lasting peace is to be achieved.

I have taken inspiration and have been filled with renewed dedication from the example of our President. He has brought to

his high office a combination of personal dignity and simple though eloquent expressions of his own ideas of the fundamental religious truths upon which this great country of ours was founded. As you know, he is a man of abiding faith in God and his country. In almost every public utterance he talks about this faith in what, to my mind, is the most impressive and searching kind of human expression and prayer.

And so in conclusion, let me give you a prayer which can be used as a yardstick for our personal and spiritual requirements review and analysis, and which in my humble opinion is just as powerful and appropriate to our needs today as it was in the 13th century when it was written as a "Prayer for Peace."

"Lord, make me an instrument of your peace;
Where there is hatred, let me sow love;
Where there is injury, pardon;
Where there is doubt, faith;
Where there is despair, hope;
Where there is darkness, light;
Where there is sickness, joy;
O divine Master, grant that I may not so much seek
to be consoled as to console;
To be understood, as to understand;
To be loved, as to love.
For it is in giving that we receive;
It is in pardoning that we are pardoned;
It is in dying that we are born to eternal life."

Thank you.

MR. HENKEL: Mr. Pike is ready for your questions.

QUESTION: Sir, I would like to ask whether in this work you use a so-called input-output analysis or, if you do not, do the services to your knowledge?

SECRETARY PIKE: What do you mean by input-output analysis?

QUESTION: It is a type of computation developed by Leontief. The Air Force did some work in the field, the Department of Labor has done some work in it, in which the output can be determined as a

bill of goods or a bill of materials and then worked out on a computer to determine the inputs necessary to derive those outputs.

SECRETARY PIKE: I will ask Ray Clarke or Frank Brown if they can answer that question.

MR. CLARKE: We do not use the input-output method.

QUESTION: By using the concept of providing assets to establish a mobilization reserve prior to D-day, plus the production base to take up the deficit, is there a consideration given to the possible loss of industry or production base by enemy action in these computations?

SECRETARY PIKE: The answer to your question is no as of the present date. However, all of the problems and the implications involved in the question you raised are under close study now.

QUESTION: We have had a lot of speakers tell us that this mid-range plan is in the very near future. We will have it very soon. Would you care to estimate when we will have it?

SECRETARY PIKE: I have been very close to this thing. My deputy, Mr. Lanphier, has had the job of talking to the JCS several times a week for the past several months now. It is my understanding that the strategic phase of the plan has all been worked out. It is also my understanding that the logistics phase of it is all but worked out. This new plan should be published within a matter of weeks. That is as close an estimate as I can give you on it. It is certainly needed, starting with requirements review and analysis right on down the line. It will have a profound effect on all our logistics planning. My deputy and I decided if we did nothing more on our tour of duty here in Washington than pull that plum out of the hat, our time would have been well spent.

QUESTION: In the past, the Assistant Secretary (Comptroller) has exercised quite a bit of detailed review over our materiel requirements. It seems from the statement of what your office does that some of those responsibilities may have been transferred to you. Is that right?

SECRETARY PIKE: Yes, that is correct, and that is a matter that is in process of evolution and being worked out. We are still

comparatively new in this whole business and we have a very fine relationship with Secretary McNeil. What you say is true; there are many areas of review and analysis that heretofore have been done in his office that will be done in our office.

QUESTION: Mr. Secretary, you gave us the answer to this but I didn't understand it. I would like it developed a little more. You were talking about raw materials and you stated that this was not measured against the military stated requirements but against something else. What was the "else"? I didn't understand that part of the discussion. It came just before your illustration about aluminum and Mr. Kyes' decision.

SECRETARY PIKE: If I said that, I am confounded, too. I can't follow that one myself. If you can make your question more specific, perhaps I can.

QUESTION: It was having to do with raw materials and why did we decide we didn't need a third round of aluminum expansion. The military's requirements for aluminum were unrealistic apparently.

SECRETARY PIKE: That is correct, yes.

QUESTION: But why? I failed to understand what was wrong.

SECRETARY PIKE: I can't give you all the details. I mentioned one phase of it that I do recall, the generation of scrap had not been adequately provided for so far as the reworking of that scrap back into the supply area. The original determination had been made upon an older mobilization plan. We did get a look at the newer Air Force schedule of aircraft and the result of the whole thing was an up-to-date plan so far as the Air Force was concerned. A new and very careful recheck of the requirements just came up with fewer tons of aluminum required than the original computation had indicated. Can you answer that question, Mr. Brown?

MR. BROWN: We do not measure raw materials requirements against the pure end-item requirement. The end-item requirement does not take into account how much of the end items we are going to produce or the procurement objective of the end item. In other words you only need raw materials as fast as you are going to chew them up. You don't need them any faster. So you measure raw materials

requirements against either the procurement objective or the production capability, or a combination of the two, and not against the pure end-item requirements. If you measured against the pure end-item requirements, you would plan for large amounts of raw material that you did not need.

QUESTION: Mr. Secretary, you mentioned the Materiel Planning Study in your talk. I wonder if you would care to have your assistants show the slides. We might have some questions in that field if you show them.

SECRETARY PIKE: Do you want to show the slides, Mr. Clarke?

MR. CLARKE: Ordinarily we don't use the completed form for the first slide as it is apt to be confusing at first glance with figures entered in all the blocks, but I am using it today because the elements of the study are printed in the kind of type that I believe will be visible throughout the auditorium.

Chart 2, page 21.--The Materiel Planning Study is broken down into two basic elements horizontally. That is the mobilization program in the top half (lines 1 through 15) and the peacetime program in the bottom half (lines 16 through 45).

Vertically, we have a four-way breakdown--the past for the peacetime program (columns a and b), elements of the study (column c), status as of a point in time (column e)--both under the mobilization program as of the assumed M-day and as of the current cutoff date then your forecast into the future throughout the planning period (column f through m). The mobilization planning period in this illustration has been assumed to be four years. I understand the new guidance will put it on a three-year planning basis.

The development of the figures on the form is basic to any end-item requirements determination. Generally, in a study of this nature, you would begin with the peacetime position, that is you would develop your initial allowances for the forces in being as of the cutoff date of the study (line 16, column e). Now those are added to the rest of the elements--reserve forces (line 18); pipeline requirements (line 20); giving a total (lines 23 and 24). So your basic elements then are: initial allowances for your active forces and reserve forces; pipeline, and total. The sum of those are the total requirements as of that point in time (column e).

CHART 2

(Enter Classification)

SECTION I IDENTIFICATION

DEPARTMENT OF DEFENSE
MATERIEL PLANNING STUDY

DATE PREPARED	USING AGENCY	PURCHASING AGENCY

PROCUREMENT LEADTIME (Months)	TOTAL		PRODUCTION		ADM
	INITIAL	REORDER	INITIAL	REORDER	
CURRENT					
MOB.					

ITEM

OSD REF. NO.

REPORT CONTROL SYMBOL[1]

UNIT COST | UNIT OF MEASURE

SECTION II MOBILIZATION

a MOBILIZATION NOTES	b
M-DAY MAT. REQUIREMENT	
OPERATIVE BASE	INOPERATIVE BASE
MRMR	
OPERATIVE BASE	INOPERATIVE BASE
$ QUANTITY	$ QUANTITY

LINE	c ELEMENTS OF STUDY	d PERIOD	e M-DAY	f M + 3	g M + 6	h M + 9	i M + 12	j M + 18	k M + 24	l M + 36	m M + 48	LINE
				FORECAST OF REQUIREMENTS AND SUPPLY								
1	INITIAL ALLOWANCES	P										1
2		P										2
3		P										3
4	LOSSES/CONSUMPTION	P										4
5	MATERIEL PIPELINE	P										5
6	**MOBILIZATION MATERIEL REQUIREMENT - PERIOD** (Sum L. 1 thru 5)	C										6
7	**- CUMULATIVE**	C										7
8	U.S. ARMY MOBILIZATION MATERIEL REQUIREMENT LESS PTFMR AS OF M-DAY	C										8
9	U.S. NAVY MOBILIZATION MATERIEL REQUIREMENT LESS PTFMR AS OF M-DAY	C										9
10	USAF MOBILIZATION MATERIEL REQUIREMENT LESS PTFMR AS OF M-DAY	C										10
11	USMC MOBILIZATION MATERIEL REQUIREMENT LESS PTFMR AS OF M-DAY	C										11
12	JOINT MOBILIZATION MATERIEL REQUIREMENT LESS PTFMR AS OF M-DAY	C										12
13	MMPC - OPERATIVE BASE: M-DAY FACILITIES	C										13
14	: ADDITIONAL FACILITIES	C										14
15	- INOPERATIVE BASE	C										15

SEC. III TIME PERIOD

EXPERIENCE DATA

SECTION IV CURRENT

LINE	c	d	e									LINE
			CURRENT AS OF									
16	INITIAL ALLOWANCES	P										16
17		P										17
18		P										18
19	PEACETIME LOSSES/CONSUMPTION	P										19
20	PEACETIME MATERIEL PIPELINE	P										20
21	COMBAT LOSSES/CONSUMPTION	P										21
22	COMBAT MATERIEL PIPELINE	P										22
23	**PTFMR - PERIOD** (Sum L. 16 thru 22)	P										23
24	**- CUMULATIVE** (Excl. Losses as of M-Day)	C										24
25	MOBILIZATION RESERVE MATERIEL REQUIREMENT - RECOMMENDED	EP										25
26	**TOTAL MATERIEL REQUIREMENT** (Sum L. 24, 25)	C										26
27	STOCK ON HAND - IN SERVICE AND READY FOR USE	BP										27
28	RECEIPTS FROM REBUILD (Total Reparable)	P										28
29	TRANSFERS (Net)	P										29
30	**TOTAL STOCKS EXCL. PROCUREMENT** (Cumulate L. 27 thru 29)	C										30
31	**TOTAL MATERIEL PROCUREMENT OBJECTIVE** (L. 26 minus 30)	C										31

SECTIONS V - VI STATUS

LINE	c	d	e									LINE
	SECTION V - PRODUCTION AND FUNDING STATUS											32
32	PRODUCTION SCHEDULE - FUNDED	C										33
33	**TOTAL ASSETS INCLUDING PRODUCTION SCHEDULE** (Sum L. 30, 32)	C										34
34	OVER (+) OR SHORT (-) - PTFMR (L. 33 minus 24)	EP										35
35	OVER (+) OR SHORT (-) - M-DAY MATERIEL REQUIREMENT	EP										36
36	PRODUCTION SCHEDULE - PROGRAMMED (Fiscal Year 19)	C										37
37	ESTIMATED FOR FISCAL YEAR 19	C										38
	SECTION VI - RECEIPTS AND SUPPLY STATUS											39
38	RECEIPTS INTO SUPPLY SYSTEM	C										40
39	**TOTAL ASSETS READY FOR ISSUE** (Sum L. 30, 38)	C										41
40	OVER (+) OR SHORT (-) - PTFMR (L. 39 minus 24)	EP										42
41	OVER (+) OR SHORT (-) - M-DAY MATERIEL REQUIREMENT	EP										43
42	MDAP PROGRAM	C										44
43	MDAP SCHEDULED DELIVERIES	C										45
44												
45	TOTAL PRODUCTION SCHEDULE - ALL CLAIMANTS											

SEC. VII OTHER

P - Period EP - End of Period C - Cumulative BP - Beginning of Period MRMR - Mobilization Reserve Material Requirement PTFMR - Peacetime Force Material Requirement MMPC - Mobilization Materiel Procurement Capability

[1]Enter Report Control Symbol assigned

(Enter Classification)

DD FORM 1 MAR 54 764 REPLACES DD FORMS 436-4 AND 529 WHICH ARE OBSOLETE.

F01

(Enter Classification)

SECTION VIII STOCK ON HAND INFORMATION

IDENTIFICATION	Z/I	O/S	TOTAL	BASIS OF ASSETS			
				ACTUAL		DERIVED	
				Z/I	O/S	Z/I	O/S
DEPOT STOCKS							
BASE STOCKS							
IN USE STOCKS							
RESERVE FORCES							
TOTAL							
SUBSTITUTE ITEMS *(Applicable)*							
SUBSTITUTE ITEMS *(Inapplicable)*							

REMARKS

SECTION IX FUNDING INFORMATION

APPROPRIATION OR SOURCE	YEAR	UNITS	COST

SECTION X - APPROVAL

FOR TECHNICAL SERVICE, BUREAU OR COMMAND

FOR DEPARTMENT

E55783

(Enter Classification)

Now the future forecast shows increments or decrements to that position as of the takeoff date of the study (columns f through l). In addition it brings in the third requirements factor, which is your peacetime training and consumption allowances as shown on line 19. Developing that then, gives you the forces in being as of the assumed M-day, which in this case is 1 July 1955 (sum of entries in columns e through j, lines 16, 17, and 18). You then translate the forces in being on this M-day to your 1 July 1955 status under the mobilization section of the form (lines 1, 2, and 3, column e).

In other words the 3,030 here (line 1, column e) is the sum of 3,040 (line 16, column e) minus 2 (line 16, column h), minus 2 (line 16, column i), minus 6 (line 16, column j). The 2,200 (line 3, column e) is identical with the 2,200 here (line 18, column e) which has had no change during the planning period (line 18, columns e through j). The difference in the pipeline figure of 998 (line 5, column e), as opposed to the 56 (line 20, columns e through j), is the additional pipeline requirement supporting increased activity under mobilization.

Under the mobilization section of the form (lines 1 through 7) you have the same requirements elements as under the peacetime program; initial allowances (lines 1, 2, and 3), consumption (line 4), pipeline (line 5), and total (lines 6 and 7). Entries throughout the planning period (columns f through m), reflect an increment or a decrement to the position as of M-day (column e).

Having established the gross requirement (line 7), you then deduct the peacetime force materiel requirement (PTFMR) which has been provided for under the peacetime program as of M-day. The 5,286 (column c, line 24) is deducted from line 7 entries, which are cumulative across the entire planning cycle, to give you in this illustration the army mobilization materiel requirements (AMMR)--(line 8, columns e through m).

In the case of single service purchase assignment items, the same identical figures are taken from 764's for the other services and added to the purchasing service's requirement (lines 9, 10, and 11). That gives you the joint mobilization materiel requirement (JMMR) less that part that has been provided for under the peacetime program (line 12, columns e through m).

The next step is to apply your mobilization procurement capability to that joint requirement. This is to determine your P-day,

or that point in time at which the rate of production will be equal to or exceed the rate of requirement. We do that on both an operative production base, that is the facilities that are in production on M-day, plus additional facilities that can be brought into being after M-day (lines 13 and 14); or on an inoperative base, where facilities are not in production on M-day (line 15). This item was on an operative base so we have entries here (lines 13 and 14).

In determining the mobilization reserve materiel requirement (MRMR), we must relate the production capability (line 13) to the requirement (line 12) to ascertain that point in time when the rate of requirement (line 12) is equaled or exceeded by the procurement capability (line 13). This represents P-day. That point on this illustration, I believe, is at the M plus 6 period, and the amount or quantity there is 3,787 (line 12 minus line 13 column g). That 3,787 then becomes the entry for the joint mobilization reserve materiel requirement (line 12, column a), which is then apportioned (lines 8 through 11) among the using services in accordance with a formula which insures that the immediate requirements of the using services would be met fully during the period following M-day.

Having established that portion of the joint mobilization reserve materiel requirement that belongs to the Army, in this case the 3,000 (line 8, column a), we then enter in line 25 that part of the Army's MRMR that it is desired to be included in the current program. In this case, the Army desired to stock 100 percent, so 3,000 is entered on line 25 as an additional part of the peacetime program. The sum total, then, of your gross peacetime requirement (line 24), plus your MRMR (line 25) gives the total material requirement under the peacetime program.

The next step obviously is to apply what you have in current stocks on hand, (line 27, column e) and additional receipts (line 32, columns e through l), less assets you plan to transfer out (line 29), such as transfers to MDAP, against the requirement (line 26). Notice that the assets you have available to you are assets generated from current peacetime production programs. Line 32 gives you the peacetime production schedule from current and prior-year funds and indicates that during the planning period up to the assumed M-day 5,970 (line 32, column j) additional WIDGETS will be available.

The sum total then of your stocks reported on line 30 plus new procurement reported on line 32 gives the total assets including the production schedule (line 33) which will be available to meet your program.

Lines 34 and 35 are the meat of the study, because they indicate what this requirement-assets relationship means. For instance, line 34 (column e) shows that as of 1 October 1953, which was the stock cutoff date of the study, the Army was 946 WIDGETS short of meeting the current peacetime program for equipping its active forces and reserve forces. Thereafter, however, it indicates that it is in a plus position and will remain so throughout the planning period.

It indicates something else. On line 35, while you were short of meeting the MRMR in the early stages of the planning period (columns e through h), at the end of the fiscal year 1955 (column j), there was not only sufficient equipment to support the mobilization program but there would be 1,268 WIDGETS in excess of needs, based on an operative production base.

The question obviously would arise, if you are going to be in an excess position, why not cut down production to bring us out even? If we did that, we would turn around and increase the mobilization reserve materiel requirement from 3,000 (line 8, column a) to 7,747 (line 8, column b). The reason for that is, that if we cut off the production base we would be on an inoperative base and would get no substantial post M-day production until well into the second year. The result is that P-day would be much further away and the MRMR would go from 3,787 to 8,867.

Line 34 is the measuring stick of what our current production programs will give us in the way of assets to apply against mobilization reserve requirements. The plus entries show the extent to which mobilization reserve stocks will be on hand. We have provided lines 36 and 37 to reflect future fiscal years buying and budgeting programs. On this year's submissions, we reflected a hypothetical fiscal year 1955 buying program on line 36, and on line 37 we reflected the fiscal year 1956 estimate.

In section VI of the study are the same elements that we have in section V, except that they are phased on a receipt-into-the-supply-system basis as opposed to production schedules accepted at the

manufacturer's plant, which is reflected on line 32. Here we feel it is significant to know when the supply sergeant will have the item on his shelf ready for issue to supply an immediate need, as opposed to when it is in the manufacturer's plant and requires modification and shipping time prior to availability.

As you will note on this M-day readiness on a receipt basis (line 41), under this illustration you have a deficit position in the first half of the fiscal year 1955, whereas on an acceptance basis (line 35) you have a plus position.

We provided in the lower half of this section for a statement of the MDAP program (line 42), the extent to which that program is being achieved, and, if so, whether it is being met from production as represented on line 43, or from existing stocks as shown on line 44. If they are being met from existing stocks of the services, obviously, these plus entries here would be reflected as minus entries on line 29. Line 45 reflects the total production schedule for all claimants, which also gives an indication as to the production position (columns j and k) as of the assumed M-day.

QUESTION: It would seem to me that one of the key factors in such studies would be time factors. In other words a study made as of 31 July might be entirely changed three months later. If that is the case, are these studies made periodically, and, if so, at what frequency?

MR. CLARKE: Any statement of requirements that you obtain is valid for as long as the basic guidance on which it is predicated exists and remains firm. Mr. Pike mentioned that we were now embarking on a program to get an annual cycle, if we could, to provide a firm program.

What we hope to do is this: We propose an annual cycle of requirements submissions, sufficiently in advance of the development of the budget program to allow a firming up of the picture for a year. This will provide a program that will carry us through the budgetary period. This cycling must be keyed back to the guidance which will require that joint plans be made available to the departments at least 9, 10, or 12 months in advance of the beginning of the cycle. In other words if we expect a program to be firmed up for a budget which normally falls in the September-October period, the departments should have the joint guidance from the JCS no later than the first of the year.

This year we have had one submission. This is the first submission on 764. We called for it to come in during September or October. We still have some to come. I think that the biggest job we can do is to get the Materiel Planning Study used much more than it is, uniformly throughout the three departments. Once we do that, on a much wider coverage than we would ever ask for, the departments will have a far better basis for evaluating their programs and for developing budgets. But so far as your specific question is concerned, we are tied in with the guidance cycle, as we must be.

QUESTION: In all this work you have to somehow or other check the validity of it. Mr. Secretary, have you been able to check the validity in any particular program?

SECRETARY PIKE: We have very definitely, and this again ties in with a point I tried to make, that getting a check against the overall planning assumptions is a lot more important than some of the nuts and bolts and detailed computations involved.

As a result of one submission from one of the departments--I don't like to mention names or commodities--suffice it to say that we have had one submission covering a major category of materiel from one of the departments that, when we got it all dressed up and put it on the Materiel Planning Study, DD Form 764, and Frank Brown and his men proceeded with an analysis of the thing, it developed to be so completely nonrealistic that the military department involved was very happy to have the whole study back with our conclusions and comments, and that particular requirement is now being reworked.

QUESTION: That is the thing I meant.

SECRETARY PIKE: This particular category is important dollar-wise. It is indicative of the type of thing that we aspire to do in our office of the DOD.

Ultimately, we feel that the best hope of this program lies with the military departments. There is a directive that has not been completely implemented by the military departments that requires each military department to have an office for the review and analysis of requirements. It is being done more completely in the Navy than in the other services at this time. We are on a brand new approach. The form is new. As Ray Clarke indicated, we are just getting a few

submissions today. Ultimately, we hope that the OSD might work itself out of business and have it done in the military departments, with an overall review by our office.

MR. HENKEL: Mr. Secretary, I am sure we all have a better understanding of some of the problems you have in the determination of requirements. On behalf of the Commandant, I thank you and your assistants for giving us such an excellent discussion.

(3 Feb 1955--250)S/ekh

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