NEW CONCEPTS OF INVENTORY DISTRIBUTION AND INVENTORY CONTROL

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Major General George W. Mundy, USAF, Director of Supply and Services, Office of the Deputy Chief of Staff, Materiel, Department of the Air Force, was born in Cedartown, Georgia, 7 August 1905. In 1924 he attended Emory University in Georgia and then entered the U. S. Military Academy from where he was graduated and commissioned a second lieutenant in the Regular Army on 9 June 1928. He entered flying training the same year, completing the primary and basic phases at Brooks Field, Texas. In 1929 he completed advanced flying training at Kelly Field, Texas, and was graduated as a rated pilot. Subsequently, he held various stateside assignments some of which were: 1941-42, commanding officer, Air Proving Ground, Eglin Field; 1942-44, commanded a twin engine advanced flying school, George Field, Ill., and a B-26 Flying Training Transition School, Del Rio, Texas; and in January 1945, completed work as a student, Army-Navy Staff College, Wash., D. C. General Mundy was assigned to the Pacific Area in February 1945, some of his duties being: commander 39th Bomb Group, VHB, Guam, March 1945; commander, 313th Bomb Wing, Tinian, August 1945; from January 1946-June 1947, he commanded this latter wing at Clark Field, Philippine Islands. He then became a student at the National War College in Washington. After being graduated he was assigned as deputy director and later as director of Supply, Maintenance, and Services, Air Materiel Command, Dayton, Ohio. In October 1952 he was given his current assignment. This is General Mundy's first lecture at the Industrial College of the Armed Forces.

NEW CONCEPTS OF INVENTORY DISTRIBUTION AND INVENTORY CONTROL

8 December 1954

GENERAL NIBLO: Good morning everyone. Today we conclude our series of four integrated lectures in the field of supply management. Based upon our past experiences in the Armed Forces and as a result of the consideration of the impact of a future war upon our economy, each of the four services has recognized the need for adopting new methods and supply procedures and they are all doing something about it in the field of supply management.

This morning we are going to hear some information in regard to the new procedures and policies that have already been put into effect as well as some of the newer concepts that are designed to further improve the position in supply management.

Our guest speaker, General Mundy, is Director of Supply and Services, in the Office of the Deputy Chief of Staff, Materiel, Department of the Air Force. He will discuss new management concepts on inventory distribution and inventory control.

George, it is a pleasure to present you to this year's class of the Industrial College.

Ladies and gentlemen, General Mundy.

GENERAL MUNDY: Thank you, General Niblo. Members of the Industrial College and guests: I have been asked to talk on "New Concepts of Inventory Distribution and Inventory Control." What I have to say, of course, pertains primarily to the Air Force, but I am sure we have enough in common with the other services that there will be varying degrees of applicability.

Before we proceed to my topic, I would like to confess that I am relatively new to the materiel business. Prior to 1948 I had been assigned to flying units and technical type units. I was rather disappointed when I was order to AMC because in my previous service I had always had a little contempt for the logistics side of the house. I didn't think they had done too well with what they had. I didn't base it on anything; it was just my feeling. When I got into supply, I was assured I had

some influence. I thought I would get my big foot in the door and get some of the supplies out. It took me about a year to find out that the logistics side of the house had done a good job, that the supply job was big, technical, and complex.

I had an experience recently that I think will highlight this. I bought a shopsmith. This is a multipurpose machine tool, a power tool that first came on the market about 1947. It is a relatively simple gadget. About a year ago, they had a model change--the only model change they have had in this piece of equipment. I purchased my shopsmith six months ago, and have found that the supply agency I deal with is not equal in effectiveness to that of any of our depots in the Air Force. Their technical orders do not make me ashamed of our technical orders at all. I just received the jigsaw which was part of this equipment. The technical order that went with it could not compare with those of the Air Force. I am not belittling the shopsmith. It is a fine piece of equipment. But I must compare it with the F-100, which has a new airframe, new engine, and new systems in its latest configuration. Further, these aircraft are undergoing rapid development, and the parts and assemblies run into thousands of items. It is rather surprising in the light of the people we have to manage our systems that you ever get anything out at the end of it.

This supply business, as I said, is technical and very complex. The people in it can expect little thanks and little recognition for the hard work that they do. In fact I have heard it said that anyone associated with supply can expect assorted reactions.

Now we have had supply systems for a long time. The Air Force--and this is a little surprising to most people--had had its own supply system since it was the aviation section of the Signal Corps. We built our first depot in 1917. All the other services had had their supply systems. What is the purpose of changing it now? What is happening?

I think a brief review of conditions is in order. I am sure that what I am going to touch on, you all know, but I hope you will all bear with me for continuity's sake.

You are all fully aware of the world situation today. You know that we live in a bipolar world and under conditions where war could occur at any minute--particularly if we allow ourselves to get weak militarily.

You have in your lifetime seen the airplane become supersonic and long-range. You have seen the liberation of nuclear energy as a weapon. Today a B-47 with a crew of three carrying an H-bomb can in one sortie drop more destructive power than did the combined American and British Air Forces on Germany in World War II.

This country is constitutionally and politically incapable of starting a war. If war occurs, it is the United States that will be attacked first. Russia has watched the United States enter World War I and World War II and swing the balance in favor of victory. Without the continental United States being attacked, and with time to build up, we have turned out to be a decisive force in those two wars. If Russia starts a major war, it is going to attack us, but good. So we must be prepared to retaliate in a manner that will be effective.

This in effect is our national policy. It recognizes the dominance of air power and the necessity for a large "second best to none" air force in being. This is the first time in our history that we have had to have a large force in being over an extended period. Heretofore, all the forces we have had have been built up in time of war.

We will have no buildup period in any future war. We are in that period now. The next phase will be the decisive phase. This will be a race between atomic forces to destroy the warmaking potential of the other force. This phase will most likely be very brief--a few days to a couple of months. But it's a phase that we must not lose. I think we all recognize that.

We must also be prepared to fight a peripheral or vest pocket war or a series of wars similar to Korea. In order to maintain our capability for defense and massive retaliation at all times, we must guarantee that our retaliatory force remains inviolate, that it is not weakened, and that it keeps its capability to strike back. This adds to the complexity of our problem in the Air Force.

The maintenance of large military forces in being is very expensive. Electronic items, aeronautical equipment, and nuclear weapons are all very costly. Most of these items are all subject to rapid development which generates a high rate of obsolescence. This necessitates constant phasing in of the new and phasing out of the old or second-line equipment.

As rich as this country is, there is a limit to the dollars available. The way the money made available for our forces is spent will in large

measure determine the amount of air power in being and the adequacy of that power. We must be certain we select the right amount in the light of the conditions we will face. Provisioning a materiel pipeline all over the world is very expensive and doesn't necessarily guarantee, under the conditions we face, the ability to effectively use those supplies even though we buy them.

The conditions I have just outlined dictate that the Air Force leave no stone unturned to get the most for the dollars available. They also indicate that the support system for our forces to be used overseas must be speeded up and revised or it will be of no avail because of atomic war and the anticipated short duration of it. In the past it has taken from 30 to 90 days to get a requisition processed and have the item en route to overseas units. Now if anything cannot be delivered to our combat air forces in 90 days, you might as well not have it.

In order to describe the improvement in our distribution and inventory control procedures, I must first outline the overall policy.

We fully recognize the requirement for a basic system. This system provides us with a base with which we are able to handle our routine operations. However, from this point we effect a major departure from the system and adopt a policy of management by selection. To illustrate, our first action has been to isolate certain major commodity areas which require special treatment. These include such things as food, clothing, ammunition, POL, and commercial type items. Food, as you are aware, we obtain directly from the Army and are responsible for distribution only in certain overseas areas. Clothing and POL are operated under the stock fund principle and generally are managed separately from other supplies. Ammunition is managed as a separate entity--in that different stock levels, requirement computation methods, and distribution systems are utilized. For commercial type items, we have determined that the majority of them can best be handled by obtaining them directly from the civilian distribution system, and thus avoid the costs of investment, depot warehousing, and attendant overhead functions. I expect to go into this latter area in more detail shortly.

In the general improvement of our basic inventory control and reporting system, we still continue the principle of management by selection. One of our actions in this regard was to establish the Inventory Categorization Program. A review of approximately 750,000 items in the Air Force distribution system indicated the following: Two percent of the line items accounted for approximately 45 percent of the total

dollar investment; 22 percent of the line items accounted for approximately 40 percent of the total dollar investment; and the remaining 76 percent of the line items accounted for only about 15 percent of the investment. It is obvious from this that a very small percentage of our items makes up the bulk of our dollar cost.

Realizing this, we have divided our inventory into three cost categories. The purpose of this is to apply more management to the few expensive items and less management to the bulk of the items which are relatively low cost.

For Cost Category I (Hi-Value) items, the few high cost items, we are taking action to reduce our stock levels and pipeline time and plan to pursue this action further in the near future. In effect our intentions are to centralize our stock in this cost category and apply stringent controls to them, even to the extent of serial number control in some cases. Based on our capability of effecting rapid resupply action, we plan to reduce procurement drastically.

For the approximately 550,000 items in our stocks which constitute a very minor portion of our dollar investment, we plan to increase our stocks at the consumer points and reduce requisitioning frequencies in an effort to reduce overhead costs attendant to such operations.

Another thing that we have gone into is monetary inventory accounting. This has come about as a result of Public Law 216 and the fact that we also are interested in getting more information in order to be better able to manage our supplies. As of 1 April 1954, monetary inventory accounting had been applied to all warehouse assets at ZI depots and to all base supply stocks, worldwide. We are currently in the process of applying dollar accounting to all stocks at Air Force depots overseas and to all capital equipment, including aircraft and that equipment in use by units. When these data are developed, they will be used as a part of the Air Force financial control system; they also provide us with an excellent tool of supply management.

Further, these data will be utilized for segmentation of the Air Force inventory. I think in the Navy it is called stratification. Segmentation, in effect, is the breakout of the inventory into current operating requirements, war reserve requirements, project support, contingency requirements or authorized retention levels and excesses, or any stratification we need for management purposes.

Another area of improved inventory control is the mechanization program. As you are aware, our AMC depots were mechanized, beginning in 1948, and in the interim some overseas depots were mechanized to a limited extent. With the advent of monetary inventory accounting and an ever-increasing requirement for item management data, it became obvious to us that the manual methods of accounting which we were using at our base level were rapidly proving inadequate. Therefore, we recently launched a program to mechanize supply accounting and related functions at base level worldwide. We feel that this action will assist materially in reducing administrative costs and at the same time provide the management data which we require.

Recognizing that even this mechanization in a very short time will be outmoded, as there will be better systems available to us, the Air Force Headquarters, in conjunction with the AMC and Wright-Air Development Center, has been working for some time on what we call "Material Information Flow Devices."

Actually, these are electronic-brain type machines which have a capability of storing information concerning inventory transactions and performing supply computations. Initial evaluation indicates that improvements through the use of these machines may be expected in computing budget and procurement requirements, developing data on which to base automatic resupply, actuarial computations, and the development of more accurate logistics factors in any manner that we like.

The AMC has a UNIVAC in the basement of the Headquarters building which is used for payroll purposes. For that purpose alone, it more than pays for itself. It is accurate in every detail and under any set of conditions will grind out the facts from the information available to it. We are also developing know-how in the use of these machines. The payroll time utilized by these machines is about a half a week a month, leaving the machine available for the rest of the month for other purposes.

Exemplary of the progress the Air Force is making in the field of inventory control and distribution is the new philosophy for management of aircraft engines. Considering their high cost, aircraft engines provide one of the most fertile areas for cost reduction through improved management controls. Aircraft engines are extremely expensive items. If we don't control them, we are going to buy engines in excess of our requirements. Engines become obsolete very rapidly. We have jet engines today in our system that are completely obsolete. There is

nothing we can do with them. We just have to get rid of them, get them out of the supply system. Today we plan to buy fewer spare engines by using airlift to reduce the repair cycle and delivery in-transit time. Aircraft engines are actually controlled by serial number.

We are in process of developing an airlift capability, utilizing commercial air to the fullest extent possible, to meet a peacetime requirement for long distances in the ZI and overseas requirements. This is a good sound program and I am sure it will result in a saving of lots of dollars. The estimate I have is a billion dollars. That is a lot of money and I am always a little cautious about some of the dollar estimates that we get with respect to savings. It is very difficult to estimate savings since there are so many factors involved. A comparison would be the number of children that one doesn't have by the use of birth control measures.

Before I proceed into the major area of redistribution and repair, I would like to philosophize a little. In the past supply was thought of primarily in terms of consumption by the troops in the field. Even until quite recently, we dealt almost exclusively in the number of rations, rounds of ammunition, and so forth, per man, per day. But, as the tools of war became more complex, we began to use an ever-increasing number of items which were capital in nature and which can and should be repaired. We must gear ourselves to make such repairs.

Early in the use of this type of item, we sent the mountain out to Mohammed and tried to do it in the field. But, as technical requirements increased, the requirement for skilled people grew, and we were gradually forced into returning more and more items to depots for repair, where the available specialists could be concentrated.

Today we are using equipment which is so complex that in many cases it must be returned to the manufacturer for repair since qualified technicians and the necessary equipment are not available to us.

It has created a situation for us wherein the recovery and repair of the item becomes almost as important as supplying it. Many of the differences in the internal supply procedures of the services can, I am sure, be traced directly to this. I have recently visited several naval and Army depots and this difference in the supply area has been the big difference. That is one reason it has been difficult to arrive at any standard organization within the three departments.

Another important area is the Air Force policy to contract with commercial sources for an ever-increasing amount of the repair work which is required. For many complex items, as I have mentioned before, such repair is performed exclusively by the manufacturer. Not only does he perform repairs but in some instances provides all materials for the support of these items. You are probably all familiar with the contract we have with Martin for the support of the Matador. We want it to feel its responsibility. We want to hold the manning of the logistics organization of the Air Force down to the minimum essential for good management in order to put more men in the fighting units. We will always operate under a personnel ceiling.

For some time the Air Force has recognized that serviceable items which are excess to base requirements might also be excess to total Air Force requirements. For that reason we have required the bases to query the depots as to whether they were excess and ask for disposition instructions. Many times we are able to dispose of surplus items at base level and save the handling and shipping cost that would be involved in sending them back to the depots. We have found this very profitable to the Air Force.

I previously made reference to our efforts to manage commercial-type items on a selection basis. For some time it seemed ironical to us that we were buying in bulk and stocking in our depots, items which were available to our bases, either through local retail outlets or from the General Services Administration, stock funds of the other services or some other source. We are short of warehouse space and when you handle anything centrally, you have to invest more for stock and pay for the overhead, processing of requisitions, and distribution. So we have made up our minds to use local purchase to the fullest extent possible. We have coded items as to whether they lend themselves to local purchase or not. Since January 1953 we have increased the number of line items authorized for local purchase from approximately 15,000 to 150,000. We are in the process of adding more.

As you know, there are many of our overseas installations which do not have local sources for these items. We have resolved that problem by having the overseas activities make quarterly allocations of funds to our overseas transportation control depots. The control depots effect the necessary procurement of items required by the overseas activity and arrange for shipment to them.

For sometime disposal has been one of our biggest headaches. It is a matter in which people in civilian life are particularly interested. Everytime you make a little boner, you read about yourself in the newspaper. You probably read about the Air Force and our medals here recently. I am sure the other services have kept pace with us in the headlines.

This disposal business is something we have to recognize. By the very nature of the work, we must have merchandising and we must have trained people. We have a program for training people and are using to the fullest extent possible civilians who have merchandising experience. We are accenting merchandising. We are also working with the Department of Defense which is doing outstanding work on disposal.

Improvements in our system are necessary, but no system is any good unless you have people to manage it. We have analyzed the personnel available to us for materiel management in our supply system. This has become one of our major problems. The supply officer of today must not only be a supply man, but must also, to a certain degree, be an accountant, a top-flight manager, and must have some knowledge of electrical accounting machine techniques. This is quite an order and we well recognize it.

In our efforts to improve our situation in this area, special emphasis has been placed on our supply training program. We have been operating a Basic Supply and Supply Services Officer's Course at Francis E. Warren Air Force Base for several years. This course is designed to teach the supply neophyte the basic fundamentals of supply and indoctrinate him with the principles of sound supply management. In this course he also gets his first indoctrination in the uses of monetary inventory accounting as a management tool.

In October of this year, we established an Advanced Supply Officer Course, also at Francis E. Warren Air Force Base. This course is for personnel who have had some supply experience and is designed to further the individual's training in supply management and to give him some training in depot supply operations. The curriculum includes all the things that are being introduced in the way of management tools--cataloging, monetary inventory control, and the inventory categorization program. He is given a very good course in this and I am sure it will improve our management. In addition we have frozen base accountable officers in their assignments for at least three years.

We are also planning to establish within the U. S. Air Force Institute of Technology (USAFIT) a graduate level course in supply management for senior supply officers. This course will be devoted principally to the techniques of management of wholesale supply operations such as will be encountered in AMC depot operations.

You have heard me make numerous references to expediting the distribution of our supplies. Our actions here can be summed up in a few words--airlift, electronic communication, and local purchase. This leads to the second point that I made earlier, that the support of our forces in the retaliatory attack must be revised and speeded up. Because of the time period, it is mandatory to support these forces right now and throughout the duration of the decisive phase of atomic war.

SAC, as stated, must be ready at the drop of a hat. If the gong sounds, they must carry out their planned offensive. The logistic plan must permit their full potential to be applied throughout the decisive phase.

In order to accomplish this, our plan envisages the use of flyaway kits and a prestocking program at the advance and staging bases. The flyaway kit represents a 30-day level of supplies for a maximum effort for the unit that has the flyaway kit. These flyaway kits represent the supplies where they are needed.

The supplies that are prestocked are those that do not lend themselves to airlift, such as gasoline, conventional ammunition, heavy equipment, and so forth. Airlift will be used for the staging and deployment; it will also be used for resupply. The basic plan, of course, calls for protection and dispersal of those things that have to be prestocked so we will have some guarantee of their availability.

I would like to make this comment on airlift: It has come of age commercially. It is used to carry urgently needed items, fragile and perishable items, and to reduce inventory. The ton-mile cost is steadily going down. The trend is to come down further. Airplanes just around the corner will reduce this to approximately 3.5 cents a ton-mile. This type of airplane will be capable of a 3,500-mile range with a 100,000-pound payload. These figures were developed by a very reliable group like Rand and doublechecked. Even if airlift didn't offer economies, it is still a military must.

We are fortunate we can afford the airlift, but even if it were terrifically expensive, it is a must today for the support of the forces overseas. I don't think under present conditions and plans, we can deploy and support our forces effectively to where we can get the full impact from them unless we use airlift support. The assurance of airlift in being permits a reduction of the pipeline that otherwise would not be acceptable. It gives a high degree of flexibility and permits us to move what we have to where we want it in a relatively short period of time.

Now the proof of the pudding is in the eating. This system for the support of SAC that I have just described has been very well tested and found exceptionally good.

In the latter part of 1952, we ran a project known as Project Red Head. Red Head was the code name given to an exercise wherein a bomb wing was to be supported under a new concept of logistics support. A wing consisting of B-50;s and B-29's was the test unit. The wing was being deployed to an overseas theater on a routine rotation.

This new logistic concept envisaged the elimination of the prestocking of certain supplies overseas, a reduction of the overseas depot effort, and an overall reduction of supplies in transit by means of a system involving fast electronic requisitioning, simplified supply procedures, reduction in paperwork, and the airlifting of certain supplies to the user. We also wanted to get specific information, which we didn't have, on the total amount of supplies related to specific types of flying and volume of flying.

We wanted to determine the adequacy of flyaway kits and supply tables. We have aircraft supply tables. We wanted to determine the most efficient supply system to achieve the shortest possible material flow cycles. We wanted to determine that portion of maintenance repair workloads of a bombardment wing which could be more feasibly and economically airlifted to the ZI depots for the accomplishment of such repair.

The project was run in two phases. Phase I was the practice phase and shakedown periods designed to acquaint personnel with the new requisitioning procedure, the preparation of the required reports, and the initiating of the airlift. This plan lasted two months. The wing continued its normal peacetime training during this period at a ZI base.

Phase II was the actual test and lasted three months. The wing was ordered to the overseas theater. This order was regarded as the signal

that war had started. Thereafter, the wing was to live out of its flyaway kits and was to be resupplied under the new concepts. Under this system, items required for the aircraft of the wing were requisitioned by electrical means on Newark which extracted the requisitions to the zonal depot responsible for the property class. The depot filled the requisition if the item was available or extracted to the opposite depot which filled it or back-ordered it. Newark maintained followup on each item through case and item control. A ZI transport system was used to move the items from the depots to Warner Robins. There the items were consolidated and shipped by C-124's on a one-every-other-day schedule to the overseas theater. Reparables generated in the theater were returned to the ZI by these same aircraft. The test was not designed to show the efficiency of the airlift. It was designed to show the efficiency of the system utilizing airlift.

This project put the spotlight on many bugs in our system--some well known; some not so well known. It also proved that effective support could be given in a more positive manner with reduced pipelines. All the wing personnel felt that they had never had it so good. They flew more hours than their requirement. More time was available had they wanted to fly more.

In this connection a few statistics are in order. Up to the time of the maneuver, we had always thought that consumption was terrifically high. During this test 560 tons of cargo were airlifted to the overseas unit, including package weight. This is an amazingly small tonnage required to support a unit which flew as many hours as this wing did. Raw engines on cradles represented 52.7 percent of this tonnage; 447 tons of reparables were returned to the ZI. Under test conditions we reduced our tare weight in package from 45 percent to 18 percent. We are sure it can be reduced much further. Of the items in the B-29 aircraft flyaway kits, 56 percent of the items were not used at all even though a large amount of flying was done. Of the remaining 44 percent of the items, 92.5 percent were in oversupply.

Now, when you consider the cost of procuring, the cost of storing, managing and moving, then it is very apparent that we have to reduce these flyaway kits to the very minimum, that can be absolutely related to consumption.

The test offered many opportunities of improving the format for electrical communications. In fact air mail was better during the test than telecommunications. The test offers many opportunities to improve procedure also.

On the overall, the theories being tested were proven and the desired statistics obtained. I am sure the report is available to you.

The system tested is a decided improvement over the old system. Furthermore, in my opinion, it is an absolute must if we are to retaliate effectively. The concepts were approved and the various implementing actions have been taken.

Let me summarize the characteristics of this system as I see them. First of all, as I have mentioned before, it must be speedy, that is, it must shift from peacetime operation to wartime operation immediately. Second, it must be mobile. Our combat forces are mobile. They can pick up and move on short notice to advance bases all over the globe. We must have a transportation system capable of supporting a mobile combat force. Third, the system must be flexible. We must function under a peacetime economy while maintaining a wartime potential. We must be able to fight small wars as well as big ones. And we must be ready to use our air power in the exploitation phase of a big war, once the decisive phase is past. Fourth, and finally, the system must be dependable. If it is vulnerable, it is not dependable. I have seen several studies that have been made, not just Air Force studies, which show certain vulnerability of our present land and sea transportation system, particularly dealing with a future war. The overseas airlift may be the answer to getting the right items to the right unit at the right time. I think this direct relationship between reducing volume to the minimum and having a small force, but one that packs a big wallop, is certainly the right concept. I think we are on the right track.

In closing I want to state that we do not feel that we have solved all our problems, or that the actions I have described here are at all unusual. We do feel however that they are realistic in the light of current conditions. I also feel that mutual discussion of our problems with groups such as this will go a long way toward developing the final solution.

COLONEL SEARLE: General Mundy is ready for your questions.

QUESTION: General Mundy, would you care to comment on whether or not the logistical people are getting together with the communications people in order to make the requisition procedures compatible with faster means of transmission. I have in mind such things as requisitioning procedures, number of copies required at depots, and other types of logistical reporting requirements. In 1948, as you recall, they transmitted "Gone With the Wind" in three minutes from London to New York.

The procedure employed for logistical support in Project Red Head did not lend itself to transmission of the speed mentioned above.

GENERAL MUNDY: The first thing it did was to put the spotlight on the fact that we did not have the communications which we needed for logistical support. Then the format needed revising. We have a full annex to the Red Head report on communications.

To answer your question, we have the communications people quite interested along with the materiel people and they are getting together. As we go into the materiel information flow device, communications will be built into that machinery.

QUESTION: Along that same line, General, your quotation of 3.5 cents per ton-mile is rather outstanding. I would like to ask whether or not that is a commercial or a military computation, and, if it is a military computation, does that include the very considerable backup to keep those in the air?

GENERAL MUNDY: I have seen the presentation that I believe was put on by Rand. That is the research and development company under contract with the Air Force.

One of the big advantages of cargo-type aircraft is that you can sometimes bypass midocean bases where you get traffic congestion; this cuts down on the rehandling, also. That is one of the advantages of the airlift. A package can be picked up at a depot and carried to the point of use without further touching or handling.

I accepted completely the computation that went into that 3.5 cents a mile. If you are interested, I can arrange for you to come over to the Pentagon and see this presentation.

QUESTION: You mentioned the amount of supplies that you are handling under local procurement. Do you consider that this system will stand up under war conditions, and, if it will not, and you have to revert to central control, how do you propose to obtain the issue experience and know-how which you won't get under the present system?

GENERAL MUNDY: Well, before coding an item for local procurement, we give full consideration to the importance of it. Some decisions are made on a calculated risk basis. If we get into atomic war, the decisive period will be relatively short. I am sure, with the priority

which the services would have, we can get for that period of time sufficient supplies. If we get into the central system the items essential to operations, procured in sufficient quantities in supply tables, they will carry us through this high-rate operation period.

We feel that we have thought out the problem that you bring up as to what will happen in war and we are satisfied that the pros outweight the cons in what we have done.

QUESTION: In regard to your comment on your warehouse space, a previous speaker commented on the cutback of construction and complained about it from the standpoint of efficiency.

GENERAL MUNDY: I am looking at Mr. Drake as I answer this one. The Air Force has had a deficiency of warehousing and has made considerable noise about it. We took it to Mr. Wilson personally. Before we could get any approval of plans for the construction of warehousing, we first had to use warehousing available.

The Army in particular was revising its warehouse system and it had available certain warehousing at depots that it didn't need. We looked at these depots and we determined which ones we could use. The determination was rather difficult. I will give you the factors as we saw them.

We took on seven installations from the Army and it definitely ran up our operating costs. It would have been prohibitive except for the amount of money we were losing by the use of outside storage. I think I might explain the reasons for the increased cost.

You take an installation like Baton Rouge, for example. The space available to the Air Force at this depot is well under a million square feet. You have to operate that entire installation, pay the overhead for the supply control point, shipping, receiving, transportation, stock records, and then the maintenance aspects if the items stored there have much repair. We are paying quite a bit of overhead to get a relatively small amount of space. If we could have built at one of our existing installations, we could get much more economical operation.

We accepted this increased cost to get the needed space, pointing out the increased cost of operation, but that it was being offset by what we lost due to outside storage. We are currently working up studies indicating that we should program ourselves out of these old, expensive

installations over a period of time. We feel that we can amortize the new construction within a three-year period.

QUESTION: I think you made a very clear case for the advantages of airlift. I am just wondering how you keep this system in balance with other items, such as aviation fuel, which do not lend themselves to airlift. For example, you can get airlift items there very fast at the time you need them, but if there are other items, such as heavy fuel and similar things, which you can't get up there at the same time, isn't your system apt to get out of balance?

GENERAL MUNDY: I thought I covered that. SAC must take their supplies with them or have them prestocked at their advance bases. Airlift is used for the deployment and for the supply of critical items, and for resupply. An air base, to be usable, must have runways and aviation fuel. We feel that equipment and fuel can be so stored that they are reasonably secure against attacks. Holes in a runway from bombing can be patched up in short order.

We have the capability of deploying into certain bases. The flexibility that we get by the advance base program for staging and deploying is such that we want to capitalize on it, although we count on quite a bit of damage.

Now you cannot move bulk fuel by air efficiently; you cannot move the heavier things by air efficiently. They can be prestocked in a manner that takes full recognition of vulnerability. The airlift use is not only for high-cost items but for consumable items. In Project Red Head the airlift was definitely limited to what went up with the airplane. I don't think we should even count on airlifting bulky things like fuel to advance bases. If we have to do that, it would be better to use refueling all the way.

QUESTION: I have never been in the supply business either. I'll admit I feel pretty much as you did, but I feel pretty safe that I won't get into it because we have the Supply Corps. You said you had started a course to train specialists in the Air Force. Now will those officers go back into operational duty after they have finished their course?

GENERAL MUNDY: We have that under study. We have what is called the AFS system. In my personal opinion it doesn't go far enough. It is a good system and has many advantages, but it doesn't go far enough.

I have advocated going further and more clearly defining the materiel area and its requirement for qualified people to insure good management. This subject is under study at the present time. In the school system we have, of course, you get marked by the training you have and you are controlled in your assignment, but I feel we should go a little further.

We have studied the Army system; we have studied the Navy system; we have studied the British system. A modification of all these systems seems to fit the Air Force. We can meet our requirement for qualified personnel by administrative control and through the use of the expanded AFS system. This would do a lot for the individual and for management.

COLONEL SEARLE: General, it appears you have just about answered the problems in our minds. On behalf of the Commandant and the whole school, I thank you for a most interesting and stimulating discussion.

(15 Feb 1955--350)S/gmh

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