REPORT TO THE CONGRESS

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Savings Available By Using Space On Military Aircraft To Transport Baggage Between United States And Europe B-133025

Department of Defense

BY THE COMPTROLLER GENERAL OF THE UNITED STATES

SEPT. 26, 1968

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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-133025

To the President of the Senate and the
Speaker of the House of Representatives

This is our report on the savings available to the Department of Defense by using space on military aircraft to transport baggage between the United States and Europe.

Copies of this report are being sent to the Director, Bureau of the Budget; the Secretary of Defense; the Secretaries of the Army, Navy, and Air Force; the Secretary of Transportation; and the Commander, Military Airlift Command.

Elmer B. Staats

Comptroller General
of the United States

COMPTROLLER GENERAL'S
***REPORT TO THE** CONGRESS*

SAVINGS AVAILABLE BY USING SPACE ON MILITARY AIRCRAFT TO TRANSPORT BAGGAGE BETWEEN UNITED STATES AND EUROPE
Department of Defense B-133025

DIGEST

WHY THE REVIEW WAS MADE

The General Accounting Office (GAO) wanted to ascertain the extent to which the Department of Defense (DOD) had corrected a problem reported in a January 1962 GAO report (B-133025)--the then-inadequate use of space available on military aircraft for shipping unaccompanied personal baggage of military personnel.

The 1962 report stated that a large percentage of this baggage had been carried in commercial channels at additional public expense while space on military aircraft was not used. In that report GAO recommended that aircraft controlled by the Military Airlift Command (MAC) handle this type of shipment to the extent of space available. DOD stated that steps had been, or would be, taken to ship as much of this baggage as possible via MAC.

FINDINGS AND CONCLUSIONS

GAO found that the problem reported on in 1962 had not, to a large extent, been corrected.

During calendar year 1966, there was sufficient unused space on aircraft controlled by MAC to transport about 9.5 million pounds of additional cargo between the continental United States and Europe. During the same period, about 13.2 million pounds of unaccompanied baggage moved between the same points in commercial channels.

GAO estimates that about 6.8 million pounds of the baggage which moved commercially could have moved in the unused MAC space with resultant savings in excess of $1 million. *(See p. 18.)*

Space on military aircraft was unused primarily because DOD policy impeded unaccompanied baggage from flowing into air terminals where it could be used to top off pallets and to load the baggage compartments of passenger aircraft.

RECOMMENDATIONS OR SUGGESTIONS

GAO recommends that, if baggage is channeled into the MAC system, DOD establish specific procedures to provide for improved coordination

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SEPT. 26, 1968

between MAC and the user services. GAO suggests that, in developing these procedures, consideration be given to selecting specific areas or installations from which responsible traffic officials would direct unaccompanied baggage shipments into MAC terminals.

AGENCY ACTIONS

The Assistant Secretary of Defense (Installations and Logistics) concurred in these GAO findings and conclusions. He stated, however, that priority military materials, rather than baggage, would be used in the future to achieve greater use of MAC aircraft.

ISSUES FOR FURTHER CONSIDERATION

GAO endorses the proposed action to the extent that it will result in better use of the airlift capability of MAC. However, DOD has experienced a continuing problem in supplying MAC with high-priority military materials in quantities sufficient to make full use of its aircraft.

In GAO's opinion, unaccompanied baggage will have to be reintroduced into the MAC system if maximum use of MAC's airlift capability is to be attained.

In view of the Department's continuing need to better use space on MAC aircraft, GAO plans to review the matter after DOD has had an opportunity to take the corrective action it proposes.

LEGISLATIVE PROPOSALS

None.

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LEGISLATIVE PROPOSALS

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IN

GAD has made a review of the use of commercial carriers by DOD for shipping unaccompanied baggage of military personnel between the continental United States (CONUS) and Europe during calendar year 1966. This review was made pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

In January 1962, we reported to the Congress on an earlier review of the use of commercial air carriers for the shipment of unaccompanied baggage of DOD personnel (B-133025). At that time we recommended that the regulations be revised to require the use of available military air transportation services for moving unaccompanied baggage shipments when air shipment was indicated. In response, the Assistant Secretary of Defense (Installations and Logistics) stated that steps had been, or would be, taken to effectively channel the maximum amount of baggage proper for air shipment into the system of the Military Air Transport Service. This service is now known as MAC.

The purpose of this review was to inquire into the effectiveness of DOD's actions in channeling baggage traffic into the MAC system for the Atlantic area. We are also reviewing baggage shipping practices in the Pacific area for the same purpose. Although some of the problems encountered in the Pacific area are similar to those in the Atlantic area, there are major problems in the Pacific area that are quite different. These problems will be the subject of a separate report. Both reviews were directed primarily to analyzing the availability and use of the MAC system for baggage, and no effort was made to evaluate the overall baggage program of DOD.

We performed work at McGuire Air Force Base, New Jersey; Dover Air Force Base, Delaware; Rhein Main Air Base, Germany; and Headquarters, Military Traffic Management and Terminal Service (MTMTS), Washington, D.C.

BACKGROUND

Under the provisions of sections 406(b) and 411(a) of Title 37, United States Code, members of the military services, in connection with changes of station, are entitled to transportation of their baggage and household effects at Government expense. DOD Directives 4500.27 and 4500.31 assign authority and responsibility for, and establish policies relative to, the transportation of the baggage and household effects of military personnel.

The Director, Defense Supply Agency, had the traffic management responsibility for the movement of baggage and household effects, Defense Supply Agency Regulation 4500.1 and DOD Directive 4500.31 assigned the traffic management responsibility to the Commander, Defense Traffic Management Service (DTMS). DTMS was succeeded by MTMTS, a major command component of the Department of the Army.

Unaccompanied baggage, as used herein, includes equipment, clothing, and other essentials normally needed by the serviceman prior to the arrival of his household goods, Transportation of unaccompanied baggage is authorized by an expedited mode, including commercial air, when such mode is necessary in order to enable the service member to carry out his assigned duties or to prevent undue hardship to the member and/or his dependents,

Generally there are three methods available to the originating transportation officer for moving shipments of unaccompanied baggage overseas. The first method is the through-Government-bill-of-lading method, whereby a single bill of lading is issued to a household-goods forwarder for transportation and related services. The forwarder manages the shipment from origin to destination, and its charges are based on a single-factor rate per hundred pounds that is set forth in the tenders submitted by the forwarder to DOD. We estimate that more than 4,000 tons of unaccompanied baggage were tendered to the forwarders during calendar year 1966 for transportation between CONUS and Europe at a cost in excess of $2.7 million.

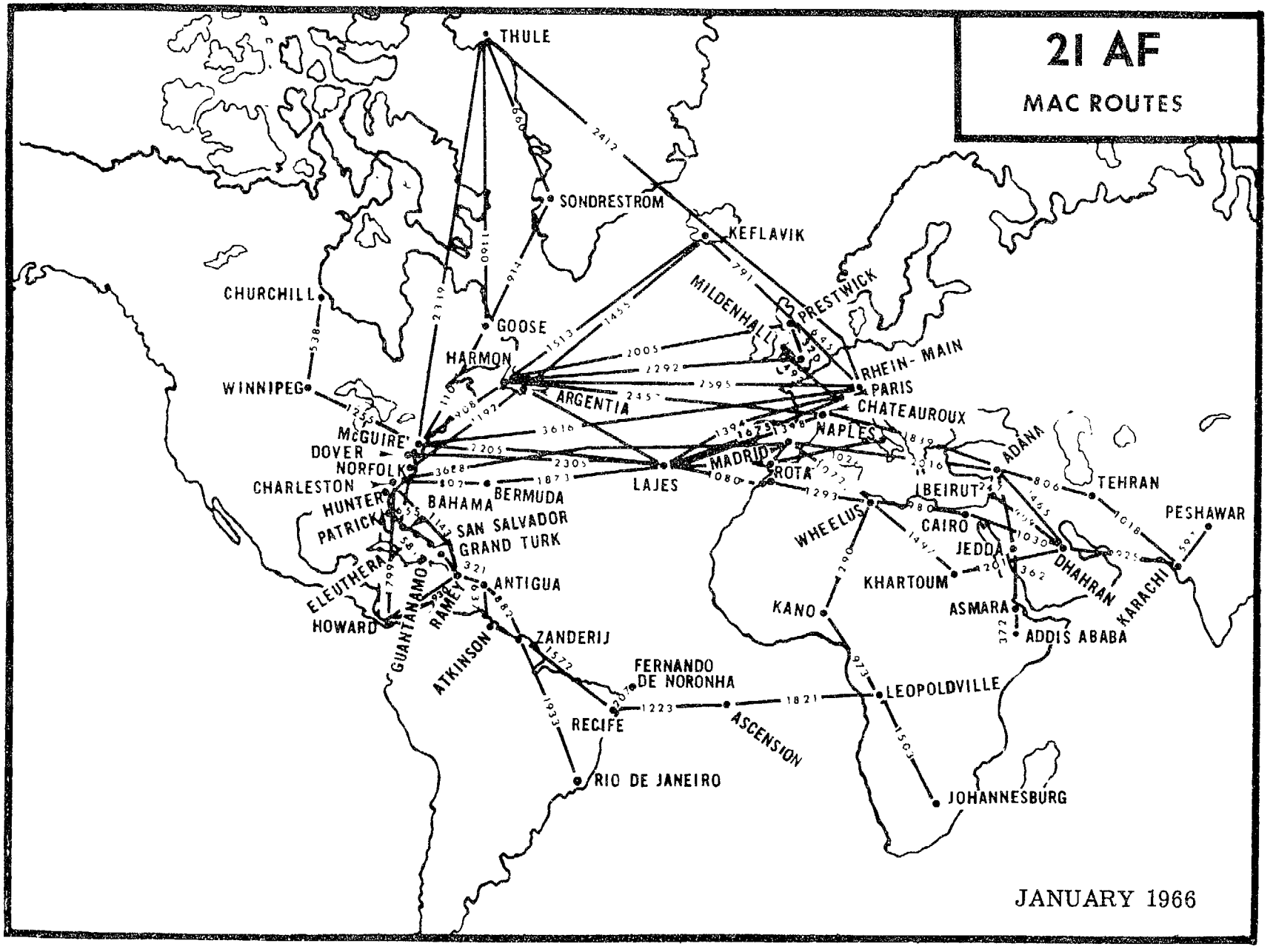
The second method, commonly referred to as the air-freight method, involves the combined use of commercial air

and surface facilities. Usually a single bill of lading is issued to the primary air carrier to cover transportation from origin to destination. The surface charges incurred incident to the movement to and from the air terminals nearest the origin and destination are included with the air carrier's charge on a single bill of lading. Information developed in our review indicated that DOD expended more than $2.3 million to move the more than 3,700 tons of unaccompanied baggage tendered during 1966 to airfreight carriers for movement between CONUS and Europe.

Under the third method, the Government manages the shipment from origin to destination and arranges separately for the various services required to accomplish the movement. Government transportation facilities are used where available and to the extent practicable.

One of the most important factors to be considered in the use of available Government facilities is the service offered by MAC. On December 7, 1956, the Secretary of Defense designated the Secretary of the Air Force as the single manager for airlift services in DOD. Under this authority MAC is responsible for providing certain types of airlift service for all military services, including scheduled service to, from, and between overseas points. Its global network of scheduled cargo and passenger service covers most of the geographical areas of the world where the United States either has major overseas bases or provides logistics support to allied countries, From four east coast terminals and two west coast terminals, MAC provides round-the-world connections.

MAC airlift service to key overseas points is integrated with baggage and cargo airlift provided by theater commanders to bases and cities in their respective areas of operation. The airlift capability of MAC is thereby connected by theater airlift with nearly all the countries of Europe in which U.S. Forces are stationed. Following are maps showing the types of transatlantic routes and related channel extensions that existed during the period of our review.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MILDENHALL
PRESTWICK
RHEIN-MAIN
PARIS
ARGENTIA
CHATEAUROUX
NAPLES
McGUIRE
DOVER
NORFOLK
CHARLESTON
HUNTER
PATRICK
BAHAMA
BERMUDA
LAJES
MADRID
ROTA
SAN SALVADOR
GRAND TURK
ELEUTHERA
HOWARD
GUANTANAMO
RAMEY
ANTIGUA
ATKINSON
ZANDERIJ
FERNANDO DE NORONHA
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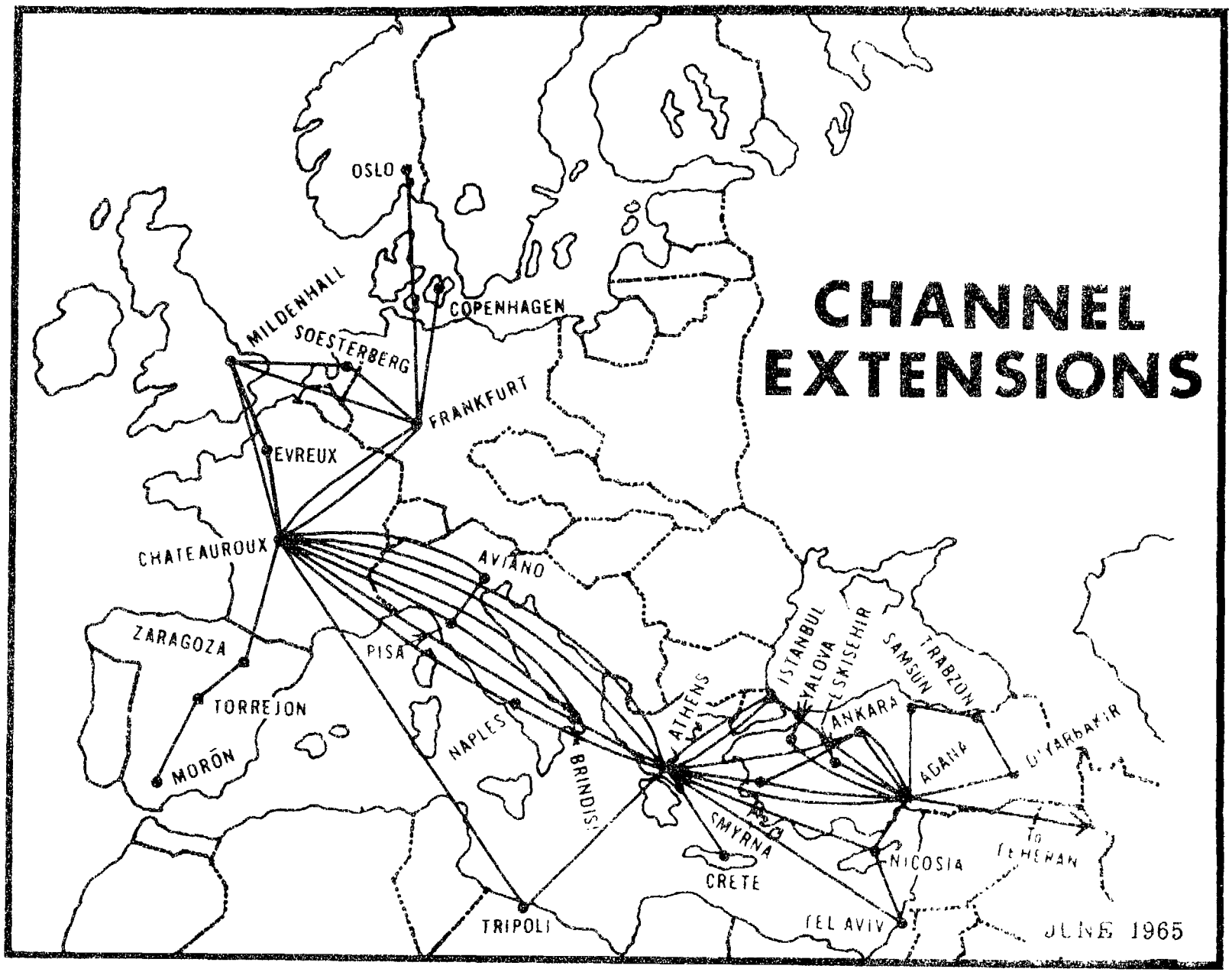
JOHANNESBURG
JANUARY 1966


CHANNEL EXTENSIONS
OSLO
COPENHAGEN
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SOESTERBERG
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EVREUX
CHATEAUROUX
AVIANO
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ZARAGOZA
TORREJON
MORÓN
NAPLES
BRINDISI
ATHENS
ISTANBUL
YALOVA
ESKISEHIR
SAMSUN
TRABZON
ANKARA
ADANA
DIYARBAKIR
SMYRNA
CRETE
NICOSIA
TO TEHERAN
TEL AVIV
TRIPOLI
JUNE 1965

The primary mission of MAC is to provide the Joint Chiefs of Staff with a strategic airlift force immediately available for use in national emergencies. To meet this primary mission, MAC is equipped with a large fleet of military transport aircraft and contracts for supplemental commercial service from various air carriers.

The Congress has manifested its desire that a portion of the overseas military air traffic be transported by commercial air carriers, but there is no indication that the Congress intended that DOD should use commercial air service at published tariff rates for overseas traffic when such traffic could be carried in available space on military or contract aircraft of MAC at a much lower cost. Moreover there is no requirement that DOD utilize the relatively high-cost services of the household-goods forwarders when MAC capabilities are not being fully utilized.

The principal officials of the Department of Defense and the Departments of the Army and Air Force responsible for the administration of activities discussed in this report are listed in appendix I.

FINDINGS AND RECOMMENDATIONS

SUBSTANTIAL SAVINGS IN COST OF TRANSPORTING UNACCOMPANIED BAGGAGE BY USING AVAILABLE SPACE ON MAC FLIGHTS

Our review showed that savings of over $1 million annually can be achieved by DOD on future shipments of unaccompanied baggage between CONUS and Europe by using available space on flights of aircraft owned or controlled by MAC to accommodate baggage which might otherwise be tendered for movement in commercial channels. We found that space was unused on aircraft outbound from CONUS because of an embargo placed on the carriage of unaccompanied baggage in MAC aircraft and that certain space was unused on inbound aircraft due to inadequate cargo backlogs at MAC overseas terminals.

We estimate, from pertinent flight records furnished by MAC, that sufficient unused space was available during calendar year 1966 on MAC flights between CONUS and selected points in Europe to have accommodated about 9.5 million pounds of additional cargo, Our detailed analyses of the unused space follow.

	Cargo flights		Passenger flights		Total	
Destination	Number of flights	Unused space (pounds)	Number of flights	Unused space (pounds)	Number of flights	Unused space (pounds)
England and Scotland	100	869,000	131	374,500	231	1,243,500
France	138	1,382,000	56	152,000	194	1,534,009
Germany	99	1,118,000	912	2,453,500	1,011	3,571,500
Spain	109	1,543,000	92	333,000	201	1,876,000
Total outbound	446	4,912,000	1,191	3,313,000	1,637	8,225,000
Origin						
England and Scotland	8	28,000	107	135,000	115	163,000
France	30	72,000	77	209,000	107	281,000
Germany	47	315,000	909	88,000	956	403,000
Spain	21	162,500	103	249,500	124	412,000
Total inbound	106	577,500	1,196	681,500	1,302	1,255,003
Total	552	5,489,500	2,387	3,994,500	2,939	9,484,000

We estimated the space available for baggage on cargo flights by computing the difference between the guaranteed allowable cabin load and the cargo actually handled, giving appropriate consideration to such factors as bulky cargo and unfavorable operating conditions. We considered the space not utilized because of these factors as unavailable for baggage transportation even though there was a possibility that such space, although not suitable for other cargo, possibly could have been used to move baggage.

Our estimate of space available on passenger flights is based on the loading experience of MAC terminal personnel at Rhein Main Air Base. During the period of operations covered by our review, this capable terminal staff was able to load 398 DC-8 passenger flights with a total of about 835,000 pounds of cargo, or an average 2,100 pounds on each flight, and to load 336 B-707 passenger flights with about 1,350,000 pounds of cargo, or an average 4,000 pounds on each flight.

We considered this average cargo-carrying experience on passenger flights originating at Rhein Main Air Base to be a minimum criterion for measuring the unused cargo capacity of MAC transatlantic passenger flights. We believe that, even at Rhein Main Air Base, given an adequate cargo backlog for better loading effectiveness, the average cargo load for each passenger flight probably could have been improved.

Information developed .during our review indicated that utilization of the otherwise unused MAC cargo capacity shown in the table on page 9 would not have resulted in any significant increase in the cost of MAC's operations and would not have necessitated additional flights. MAC officials instructed traffic management officers to not consider any cost for the air movement when the MAC aircraft would otherwise be returning to CONUS with unused cargo capacity.

We estimate that savings of over $1 million could have been realized during calendar year 1966 by effective utilization of the unused capability of MAC to move a large part of the unaccompanied baggage handled by household-goods

forwarders and direct air carriers between COWS and Europe. We have made our computations on the basis of the use of MAC facilities in conjunction with commercial or military surface transportation where required. The table on page 18 shows a detailed breakdown of our estimate of savings.

Extensive use of commercial modes on outbound shipments attributable to embargo on baggage shipments

After reviewing our earlier report concerning utilization of **MAC** aircraft for the transportation of unaccompanied baggage (see our report to the Congress dated January 1962, B-133025), the Assistant Secretary of Defense, Installations and Logistics, commented as follows:

> "Unaccompanied baggage shipments by air have been given special attention. Steps that have been taken or which are now in process should effectively channel the maximum amount of whatever unaccompanied baggage is proper for air shipment into the MATS system."

Regulations of the military services issued thereafter required transportation officers to make every effort to use MAC and theater airlift services, provided that it had been determined that those services were less costly than commercial air services.

We did not attempt to determine what effect this action had on the volume of baggage airlifted by MAC during the next several years. Available statistics suggest that by early 1965 the regulations and procedures adopted were resulting in the receipt of more unaccompanied baggage at CONUS aerial ports than **MAC** felt it could handle along with its other air-eligible cargos.

MAC airlifted about 195,000 pounds of unaccompanied baggage from east coast aerial ports during July 1965. In the 5 succeeding months, **MAC** airlifted only an average 6,000 pounds a month from these same ports. This sharp decline was attributable to an embargo imposed by the Joint Chiefs of Staff on outbound shipments.

DOD officials stated that curtailment of the flow of unaccompanied baggage to the aerial ports was necessary to (1) reduce the flow of other than high-priority traffic to the aerial ports of embarkation and (2) eliminate the

necessity of diversion to other modes, which necessitated double handling in port areas and increased costs and transit times. As a result, the Joint Chiefs of Staff directed, in July 1965, that outbound shipments of unaccompanied baggage determined to be air eligible not be moved by MAC, except baggage for specific areas to be identified by MAC from time to time.

Following this directive, MAC permitted shipments of unaccompanied baggage only to points not adequately served by commercial airlines, such as Greenland, Iceland, and Newfoundland. The DOD officials recommended maximum utilization of a combination of surface and commercial air service to other points.

It is apparent, therefore, that the procedures originally adopted by DOD for channeling cargo into the MAC system resulted in excessive flows of unaccompanied baggage into McGuire and Dover Air Force Bases, the CONUS aerial ports covered in our review. This, in turn, caused the ports to divert at least some of the baggage to other modes, which resulted in increased costs and transit times.

On the other hand, the large volume of unused MAC cargo space during calendar year 1966 suggests that an embargo, by itself, was not an effective tool for controlling the matching of air-eligible cargos with the space MAC has available for transporting them.

We examined into all payments made by military disbursing officers to forwarders in August and November 1966 and to air carriers in April and June 1966, We estimate that if these payments are representative of those made in 1966, about 7.8 million pounds of baggage moved in commercial channels to five European countries served by transatlantic routes of MAC: namely, England, France, Germany, Scotland, and Spain. Although most of the remaining baggage destined to Europe was transported to points served by MAC or theater airlift service, we have limited our report to the points served directly by MAC.

To estimate what part of the annual outbound baggage traffic could have moved in the MAC system, we related

space data for the 12 months of 1966 to data concerning the estimated baggage flow. We found that about 5.7 million pounds of the 7.8 million pounds of baggage which had moved in commercial channels in calendar year 1966 could have moved in the unused capability of MAC. A breakdown showing the baggage transported in commercial channels to selected destinations and the amount of baggage that we estimate could have been accommodated by MAC to each destination follows.

Destination	Baggage moved commercially (pounds)	Baggage which could have moved by MAC	
		Pounds	Percent of commercial
England and Scotland	932,000	855,000	92
France	909,000	909,000	100
Germany	5,417,500	3,407,500	63
Spain	546,000	546.000	100
Total	7,804,500	5,717,500	

To estimate the savings in transportation costs that could have been realized if the 5.7 million pounds of baggage had been handled by MAC, we applied the percentage of baggage which could have moved by MAC to the total commercial cost. The result, about $1.9 million, represented the commercial charges which could have been saved by using MAC facilities.

We recognize, however, that costs would have been incurred to move the shipments by surface to or from the aerial ports. We therefore deducted $455,000 from the estimated savings to cover the cost of moving the baggage within CONUS via REA Express, a type of service commonly used both by the Government and by forwarders for domestic transportation of unaccompanied baggage. The remainder, more than $1 million, very nearly represents the savings which, in our opinion, could have been achieved on outbound shipments through more effective utilization of the capabilities of MAC. (See table on p. 18.)

We did not recognize surface charges in Europe in our estimate, since we felt that efficient use of channel extensions and military surface transportation would have made this a negligible factor.

In addition, it is probable that a great deal of the more than 8.2 million pounds of unused space identified in the table on page 9 could have been used in coordination with intratheater facilities to accomplish the movement of baggage to points not covered in our review, such as Greece, Italy, and Turkey.

In our opinion, the 3.4 million pounds of unused space to France and Spain could have accommodated the 1.5 million pounds of baggage destined to these points and baggage to other points could have been used to fill the 1.9 million pounds of unused space. For example, analysis showed that about 1.3 million pounds of baggage destined to Germany that could not be accommodated on direct flights could have been transported to France or Spain and then transshipped to its final destination in the unused space on intratheater flights. Further savings of nearly $300,000 would have resulted from such action.

Inadequate backlogs of inbound cargo resulted in ineffective utilization of space

Our analysis of shipments from Europe to CONUS suggests that the regulations directing transportation officers to use MAC service inbound also were not resulting in the flow of adequate cargos to MAC's European aerial ports. It was primarily through aggressive action by responsible MAC officials in Europe that relatively effective use was made of MAC space from Europe to CONUS. Although our work was performed at Rhein Main Air Base in Germany, where the bulk of the unaccompanied baggage originated, we believe that the problems at Rhein Main Air Base were symptomatic of the problems at the other points in Europe covered by our review.

Our review at Rhein Main Air Base showed that MAC did not have significant quantities of cargo backlogged for airlifting at that terminal. The principal control

procedure used to relate space with air-eligible cargo was the scheduled forecast of user needs, but this forecast was made about 4 months in advance and was not related to space available on specific flights. As a result of the absence of an effective cargo backlog at Rhein Main Air Base, MAC officials had to search for cargo in order to fill out the load when space became available on scheduled flights. We were told that in some cases air-eligible cargos could not be located and that cargo other than air-eligible cargo was loaded to utilize the space.

MAC officials at Rhein Main Air Base indicated that they could handle much more cargo if they were permitted to maintain reasonable cargo backlogs. These officials stated that they would welcome increased shipments of unaccompanied baggage, since such baggage is adaptable to loading in baggage compartments in passenger aircraft and is ideal for topping off pallets on cargo flights. In their view, the availability of additional baggage shipments would facilitate more efficient loading of aircraft.

On the basis of our review, we estimate that DOD could have realized, as a minimum, savings of about $279,000 on inbound shipments of unaccompanied baggage by utilizing the otherwise unused space on MAC aircraft.

During calendar year 1966, the forwarders and direct air carriers were paid approximately $1.7 million to move a total of about 5.4 million pounds of unaccompanied baggage from England, France, Germany, Scotland, and Spain to CONUS, We have limited our review, as in the case of outbound shipments, to shipments from these particular points.

At the time commercial services were being used extensively, there was sufficient unused space on MAC flights from Europe to CONUS to accommodate over 20 percent of the baggage available for shipment. Our analysis of pertinent flight records showed that the unused capacity of MAC aircraft in the calendar year 1966 from the specified five countries in 'Europe to CONUS exceeded 1.2 million pounds. In computing the unused capacity of MAC aircraft, appropriate consideration was given to such factors as light and bulky cargos that would limit or preclude use of space.

Such space was not included in our estimate of the unused capacity of MAC aircraft, although it is possible that much of the space unused because of bulky cargo could have been used to move filler-type cargo, such as unaccompanied baggage.

Our analysis of the unused space on a monthly basis and the estimated baggage shipped each month indicated that about 1 million pounds of the 5.4 million pounds of baggage which had moved in commercial channels could have moved via MAC. A table showing the baggage moved commercially from the various origins and our estimate of the portion of such traffic that could have been moved by MAC follows.

Origin	Baggage moved commercially (pounds)	Baggage which could have moved by MAC	
		Pounds	Percent of commercial
England and Scotland	451,000	163,000	36
France	1,087,500	281,000	26
Germany	3,644,500	403,000	11
Spain	218,000	206,500	95
Total	5,401,000	1,053,500	

The savings of about $280,000 on inbound shipments, as shown in the table on page 18, was computed on the same basis as were the savings on outbound shipments.

Summary of potential savings

The following table summarizes our computation of savings on inbound and outbound shipments during calendar year 1966.

Destination	Total commercial cost	Percent of commercial weight possible via MAC	Estimated gross savings	Estimated surface charge (CONUS) (note a)	Estimated net savings
England and Scotland	$ 253,000	92	$ 233,000	$ 81,000	$ 152,000
Germany	1,660,000	63	1,046,000	264,500	781,500
France	376,000	100	376,000	66,500	309,500
Spain	214,500	100	214,500	43,000	171,500
Total outbound	2,503,500		1,869,500	455,000	1,414,500
Origin					
England and Scotland	153,500	36	55,500	13,000	42,500
Germany	979,000	11	107,500	30,000	77,500
France	469,500	26	122,000	20,000	102,000
Spain	79,500	95	75,500	18,000	57,500
Total inbound	1,681,500		360,500	81,000	279,500
Total	$4,185,000		$2,230,000	$536,500	$1,694,000

[a] REA Express rates were used for purposes of comparison, because of the broad scope of its operations, although less costly surface modes probably could have been used in certain cases.

We have not adjusted our estimated savings to cover such factors as (1) added fuel costs which would have resulted from the heavier loading of aircraft, (2) the cost of additional documentation and personnel required to process and handle the baggage, and (3) the cost of surface transportation in Europe. We believe that the savings that could have been achieved on shipments to points other than those served directly by MAC, as discussed earlier in this report, would have offset these factors.

Our statistics and finding with respect to space and cargo to and from France were based on activity for 9 months only, since the flight data furnished by MAC showed that, for all practical purposes, MAC airlift to and from France ceased in September 1966.

Transit times via MAC and
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Our analysis of transit times under the various modes of shipping showed that the constructive transit times of shipments moving by MAC flights compared favorably with the actual transit times experienced on shipments moved by commercial modes.

For purposes of comparison, we recorded the transit times on shipments moved by the forwarders and by air carriers in a 2-month period and computed the average transit time by each mode on shipments between points within CONUS and the European countries reviewed. To determine the effect that use of MAC facilities would have on delivery of baggage shipments, we estimated the transit times on these same shipments assuming the use of MAC facilities in conjunction with REA Express surface transportation. In our estimate, for each shipment we allowed:

1. Three days at each aerial port, on the basis of the average holding time experienced at one of the major MAC terminals.

2. The REA Express transit times within CONUS as specified in Air Force Regulation 400-28.

3. One day to accomplish the transatlantic flight.

4. A minimum of 3 days to accomplish surface transportation and delivery in Europe.

These comparisons show that the estimated transit times via MAC facilities exceeded the transit times when direct air carriers were used from origin to destination. However, transit times via MAC facilities were considerably less than the average transit times experienced when the forwarders' services were employed.

Apency actions

During our review, we met with officials of McGuire Air Force Base to obtain their comments concerning possible utilization of MAC facilities to transport shipments of unaccompanied baggage being moved by forwarders and direct air carriers.

These officials indicated that they would have no objection to having MAC move additional baggage shipments and that they would like to see the Government achieve full utilization of the space on MAC aircraft. With respect to the use of baggage compartment space on commercially operated passenger flights, the officials knew of no condition that would preclude the use of such space. Existing contracts with commercial carriers provide that the Government is entitled to use all available space of the aircraft, Unaccompanied baggage is ideally suited for loading in baggage compartments and could be used to fill any unused baggage compartment space on passenger flights.

The officials also stated that McGuire Air Force Base had the physical capability to move as much as *600* additional tons of cargo monthly but that it lacked the necessary manpower. They concurred in our observation that additional space could be made available and better palletization of cargo could be obtained with additional experienced personnel.

Subsequent to our discussions with officials of McGuire Air Force Base, the Terminal Services Officer, in a letter to GAO, cited several measures taken to improve utilization of baggage compartment space on commercial aircraft. These measures included (1) use of a computer system for identifying the kinds of cargo on hand that could be loaded in baggage compartments, (2) construction of movable dollies for segregating and transporting individual baggage compartment loads, (3) inspection of the procedures at Rhein Main Air Base to determine how greater baggage compartment utilization was being achieved at that terminal, and (4) acquisition of automated baggage-loading conveyor belts.

At the Rhein Main Air Base, MAC officials had an aggressive program of liaison with the U.S. Army Traffic

Management Agency, Europe (USATMACE). When the action they initiated to bring Air Force baggage shipments into the MAC system failed to produce sufficient cargo, MAC officials notified USATMACE. We understand that USATMACE then directed selected installations in Europe to ship baggage via the MAC terminal at Rhein Main Air Base. The principal impediment, cited by MAC officials, to even more effective utilization of the space available was that insufficient baggage was being shipped to Rhein Main Air Base to permit maintenance of adequate cargo backlogs. Satisfactory backlogs were considered to be cargos on hand for 3 to 4 days in advance of space availability.

Air Force Regulation 175-4 places the responsibility of auditing the use of military airlift with the Auditor General of the Air Force. In a letter dated July 15, 1968, the Deputy for Transportation and Communications, Department of the Air Force, advised us that utilization of MAC aircraft would be made the subject of reviews by the Auditor General of the Air Force.

Agency comments and our evaluation

We brought our findings to the attention of the Secretary of Defense on February 13, 1968, and proposed that specific procedures be established to provide for improved coordination between MAC and the user services to ensure the introduction of sufficient baggage shipments into the MAC system to maximize utilization of its capability.

The Assistant Secretary of Defense (Installations and Logistics), responding for the Secretary of Defense, commented on our findings by letter dated May 21, 1968. (See app. 11.) He stated that DOD concurred in our findings to the effect that, during calendar year 1966, MAC had not achieved maximum utilization of all available capability of owned or controlled aircraft operated between Europe and CONUS.

The Assistant Secretary stated also that the Department was pursuing a program to improve the retrograde movement of unaccompanied baggage in MAC aircraft and would initiate additional actions to encourage maximum use of available airlift to CONUS at minimum cost.

The Assistant Secretary expressed the view, however, that priority military materials, rather than unaccompanied baggage, should be used to fill belly compartment spaces or to top off pallets. He stated that DOD's actions to improve airlift utilization would be focused on procedural revisions necessary to accomplish this. In support of his view, he made reference to a recent study (not available during our review) which reportedly showed that about 38 percent of the shipments moving through MAC aerial ports in CONUS weighed less than 100 pounds and therefore were well suited to maximizing utilization of aircraft.

The important point demonstrated by our review was that significant space in MAC-controlled aircraft moving between CONUS and Europe was not being used. During the period covered by our review, there were insufficient air-eligible, small shipments--other than baggage--both inbound and outbound, with which to top off pallets and to maximize utilization of the belly compartments of MAC aircraft, We concentrated our review on baggage because it was a commodity which was moving on a relatively continuous basis outside the MAC system. Baggage is the type of cargo which is ideally suited to topping off pallets and loading in belly compartments, and its flow into the MAC system can be subjected to relatively simple controls to ensure that the volume of cargo available reasonably matches the space available on the aircraft.

If air-eligible shipments of cargo other than baggage are available and are suitable for the more efficient loading of pallets and utilization of aircraft baggage compartments, we endorse DOD's proposed action, In fact, the carriage in MAC aircraft of small, air-eligible shipments of general cargo which otherwise would move in commercial air service could result in greater savings than would the carriage of equal quantities of baggage, since the commercial air rates for general military cargo are about 30 percent greater than commercial air rates for military baggage.

Nevertheless, as shown by our earlier work reported to the Congress in 1962 and our work resulting in this report, DOD has had continuing problems in supplying MAC with the types of air-eligible cargos necessary to enable MAC to utilize its aircraft most effectively. We doubt that MAC

will have sufficient control over its cargo priorities or will, at all times, have a cargo mix available with a satisfactory amount of small shipments to obtain maximum utilization of its aircraft, in the absence of a controlled baggage flow into its aerial port terminals.

The Assistant Secretary of Defense stated further that his office would monitor closely the progress made in improving utilization of aircraft and would modify the restrictions on the movement of unaccompanied baggage via MAC as appropriate, when the space available cannot be used efficiently solely in the transportation of priority cargo. This action essentially conforms to our proposal in the draft report that DOD establish specific procedures

> "to provide for improved coordination between MAC and the user services to ensure the introduction of sufficient baggage shipments into the MAC system to maximize utilization of its capabilities.''

The Assistant Secretary did not concur in our estimate of potential savings--as shown in the table on page 18 of this report--if MAC aircraft were fully utilized, He expressed the opinion that the savings should be reduced to the extent that DOD would incur added costs for items such as manpower, material, and documentation.

In our draft report, we advised the Secretary of Defense that we recognized that there could be additional administrative and handling costs if the baggage were moved through the MAC system. We made no adjustment for these costs because:

1. Our estimate of space available on passenger aircraft was based solely on the loading experience at Rhein Main Air Base--the only location we found that was aggressively attempting to utilize the belly compartments, and, since Rhein Main was having difficulty obtaining baggage for all of the space it had available, we considered the estimated savings based on Rhein Main Air Base's aircraft utilization experience to be minimal.

2. Potential savings, not included in our estimates, on additional shipments to Greece, Italy, and Turkey should have more than offset any added handling costs on the shipments covered by our estimates.

3. No costs were readily available within DOD from which to make accurate administrative- and handling-cost estimates; however, other work we had done on DOD's costs of handling personal property suggested that the additional costs would be only a fraction of the savings we estimated.

DOD's response referred, among other things, to additional costs to band, mark, and deliver the baggage to the MAC aerial ports; to unload, redocument, and forward the baggage to destination from the aerial port of debarkation; and to arrange for temporary storage and delivery at destination. Almost 50 percent of the tonnage covered by our review was moved by commercial air service, and the balance was moved by freight forwarders. Regardless of the mode used on any of these shipments, the arrangements and costs of temporary storage and delivery would be incurred by ROD.

Our work at various locations showed, however, that space in Government-owned facilities was frequently used for temporary storage of unaccompanied baggage and that contract storage, where used, was frequently less costly than storage costs assessed on freight-forwarder shipments, For the commercial air shipments, DOD had already incurred the costs for banding, marking, and delivery of the shipments to the origin airports and from the destination airports to the final destinations. We believe that these costs would not have been significantly different if MAC, rather than a direct air carrier, had furnished the air service.

In view of the above, we believe that the expense of a study leading, at best, to marginal adjustments in our savings estimates would not be warranted.

The Assistant Secretary also made reference to problems involved in load selection at MAC aerial ports. He cited movement of outsized and noncompatible cargo, out-of-sequence forwarding of high-priority shipments, and necessity for rapid turnaround of airframes.

In our estimates of unutilized space, we made appropriate allowances for outsized and noncompatible cargos, Except for weaknesses in cargo selection procedures at McGuire Air Force Base, which have since been improved, we found no instances where out-of-sequence forwarding of high-priority shipments or requirements for rapid turnaround of the aircraft would have prevented the carriage of unaccompanied baggage if it had been available at MAC terminals.

Conclusions

We conclude that DOD could have saved in excess of $1 million if the unused space in MAC aircraft had been used to transport some of the unaccompanied baggage which had moved commercially between CONUS and Europe during calendar year 1966.

The aircraft space was unused primarily because DOD policy impeded unaccompanied baggage from flowing into the MAC terminals where MAC could have utilized it to top off its cargo pallets and to fill the baggage compartment space of its passenger aircraft.

As a result of actions taken in response to our review, MAC's cargo-handling procedures are reported to have been improved. We believe that the steps taken, or proposed to be taken, by DOD if properly implemented, will improve the utilization of MAC-controlled aircraft between CONUS and Europe.

DOD should recognize, however, that, historically, MAC has not been furnished air-eligible, general cargos in sufficient quantities to fully utilize its airlift capacity. We doubt, therefore, that the objective of substantially improving airlift utilization can be accomplished by concentrating primarily on small shipments of high-priority military supplies and equipment while giving only secondary consideration to the much greater volume of military baggage for this purpose.

If, in the process of monitoring the progress of aircraft utilization under the general-cargo approach, the Assistant Secretary finds that a modification of restrictions on the movement of unaccompanied baggage via MAC is desirable, we believe that the following observations and proposals, which were included in our draft report to the Secretary of Defense, should be helpful.

We conclude that a system permitting all unaccompanied baggage to flow freely into MAC terminals, such as was apparently adopted within CONUS from 1963 through July 1965, can overload MAC facilities and result in excess costs of handling and in the use of commercial common carriage for

cargos in excess of MAC capabilities. Conversely, a blanket embargo against shipping baggage via MAC, such as that imposed on shipments from CONUS by the Joint Chiefs of Staff in July 1965, can result in the diversion to high-cost commercial service of cargo--unaccompanied baggage--ideally suited for topping off MAC shipments and for stowage in the belly compartments of MAC's passenger aircraft.

We believe that a system for free-flowing, unaccompanied baggage only from selected installations into MAC terminals offers a satisfactory compromise between the unlimited, free-flow system and the complete embargo system. This policy, the allowance of reasonable cargo backlogs at MAC terminals, and effective terminal systems for segregating cargo compatible for loading into belly compartments of aircraft (such as the system in use at Rhein Main Air Base and the procedures adopted at McGuire Air Force Base) offer significant potential for improved use of the space in MAC aircraft and cost savings in shipments of unaccompanied baggage.

A selective system of moving baggage into MAC terminals requires close and continuing liaison between MAC officials and the traffic managers in a given area to ensure that a proper balance is maintained between the flow of cargo and the cargo backlogs being maintained at the MAC terminals. Except for the lack of adequate cargo backlogs, this liaison seemed to be working effectively in Germany but has not, to our knowledge, been established in CONUS or at other points in Europe.

Recommendations

We recommended that, if baggage is channeled into the MAC system, the Secretary of Defense establish specific procedures to provide for improved coordination between MAC and the user services. We suggest that, in developing these procedures, consideration be given to selecting specific areas or installations from which responsible traffic officials would direct unaccompanied baggage shipments into MAC terminals.

We recommend also that, to control the flow of baggage into the terminals, close liaison procedures and information flows be established between MAC terminal officials

and responsible traffic authorities, such as USATMACE in Central Europe, MTMTS in CONUS, and their counterpart organizations in Spain and in the United Kingdom,

We recommend further that MAC be permitted to retain reasonable backlogs of unaccompanied baggage at its east coast and European terminals to facilitate maximum utilization of the cargo capacity of its aircraft.

We recommend also that a study be made of traffic flows to develop the potential for utilizing space in MAC aircraft to points of interchange with intratheater airlift; for example, space available in MAC aircraft between Spain and Central Europe or between Spain and the United Kingdom for baggage destined to those points.

In view of the continuing difficulties in the utilization of MAC aircraft, we plan a further review of this matter after DOD has had some experience with its present efforts at improvement.

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PRINCIPAL OFFICIALS OF THE DEPARTMENT OF DEFENSE AND THE DEPARTMENTS OF THE ARMY AND AIR FORCE RESPONSIBLE FOR THE ADMINISTRATION OF ACTIVITIES DISCUSSED IN THIS REPORT

	Tenure of office	
	From	To
DEPARTMENT OF DEFENSE		
SECRETARY OF DEFENSE:		
Clark M. Clifford	Mar. 1968	Present
Robert S. McNamara	Jan. 1961	Feb. 1968
DEPUTY SECRETARY OF DEFENSE:		
Paul H. Nitze	July 1967	Present
Cyrus R. Vance	Jan. 1964	June 1967
ASSISTANT SECRETARY OF DEFENSE (INSTALLATIONS AND LOGISTICS):		
Thomas D. Morris	Sept. 1967	Present
Paul R. Ignatius	Dec. 1964	Aug. 1967
DEPUTY ASSISTANT SECRETARY OF DEFENSE (SUPPLY AND SERVICES):		
Paul H. Riley	Feb. 1961	Present
DIRECTORATE FOR TRANSPORTATION AND WAREHOUSING POLICY:		
Vincent F. Caputo	Feb. 1961	Present
DIRECTOR, DEFENSE SUPPLY AGENCY:		
Lieutenant General Earl C. Hedlund	July 1967	Present
Vice Admiral Joseph M. Lyle	July 1964	June 1967

PRINCIPAL OFFICIALS OF

THE DEPARTMENT OF DEFENSE AND

THE DEPARTMENTS OF THE ARMY AND AIR FORCE

RESPONSIBLE FOR THE ADMINISTRATION OF ACTIVITIES

DISCUSSED IN THIS REPORT (continued)

	Tenure of office	
	From	To
DEPARTMENT OF THE ARMY		
SECRETARY OF THE ARMY:		
Stanley R. Resor	July 1965	Present
COMMANDEX, MILITARY TRAFFIC MANAGEMENT AND TERMINAL SERVICE:		
Major General John J. Lane	Feb. 1965	Present
DEPARTMENT OF THE AIR FORCE		
SECRETARY OF THE AIR FORCE:		
Dr. Harold Brown	Oct. 1965	Present
COMMANDER, MILITARY AIRLIFT COMMAND:		
General Howell M. Estes, Jr.	July 1964	Present

ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

21 MAY 1968

INSTALLATIONS AND LOGISTICS

TS

Mr. T. E. Sullivan
Director
Transportation Division
United States General
Accounting Office
Washington, D. C. 20548

Dear Mr. Sullivan:

This is in response to your letter T-OD-F-276 of February 13, 1968, forwarding the Draft Report on "Potential Savings by Using Military Airlift Command Flights for Transporting Unaccompanied Baggage between the Continental United States and Europe," (OSD Case #2730) for review and comment.

The Department of Defense concurs with the finding of the above-referenced report to the effect that during calendar year 1966 the Military Airlift Command (MAC) did not achieve maximum utilization of all available capability of owned or controlled aircraft operated between Europe and the Continental United States. However, we do not agree that the most appropriate remedy for this situation is the reintroduction of unaccompanied baggage shipments into the MAC system for outbound movement from CONUS to Europe. Neither do we concur in the potential savings cited in your report by use of government-managed movement of baggage in lieu of commercial movements.

In response to a previous GAO Draft Report titled, "Review of Utilization of Cargo Airlift Capacity to the Pacific and Southeast Asia on Aircraft Managed by the Military Airlift Command," (OSD Case #2624), the Department of the Air Force, in their reply of September 11, 1967, discussed at some length the problems involved in load selection at MAC aerial ports. These included the requirement for sequential movement of outsized and non-compatible cargo, out of sequence forwarding of highest priority shipments, necessity for rapid turn-around of airframes, etc. These same problems obviously similarly affected the utilization of capabilities to Europe.

In their response of September 11, 1967, to your previous report: the Air Force indicated that certain actions had been taken to improve utilization of available MAC capacities. It is our intention to initiate additional actions from this office to further optimize aircraft

utilization. However we do not believe that eliminating the present restrictions on the movement of unaccompanied baggage via MAC is the appropriate method of accomplishing this goal. A recent review of cargo shipments moving through MAC aerial ports in CONUS indicates that approximately 38% of these shipments weigh less than 100 pounds. It is our view that these priority military materials should be utilized to fill out belly compartment spaces or to "top off" pallets rather than permitting unaccompanied baggage to flow once again into the MAC system. Our actions to improve airlift utilization will be focused on procedural revisions necessary to accomplish this. However, this office will monitor closely the progress made in this effort and will modify present restrictions on the movement of unaccompanied baggage via MAC as appropriate to permit such movement where we cannot efficiently use the available capacity for priority cargo.

With regard to the potential savings cited in the GAO Draft Report by using military-managed transportation vice commercial carriers, we do not concur that the only cost for the former movement is the inland CONUS Railway Express Agency charge. The GAO cost analysis fails to consider the very real costs involved in moving material via military methods and assumes that "more efficient" use of military resources could absorb the added workload without added expense. It is our opinion that an accurate cost comparison must include evaluation of the added cost to the Department of Defense in dollars and manpower to band, mark and deliver material to the MAC port; to unload, document, palletize and forward material from the MAC port; to move this material via MAC aircraft; to unload, redocument and forward each bag to destination from the aerial port of debarkation; to arrange for temporary storage or delivery at destination; to prepare and process individual billing documents for each shipment via MAC; and to accomplish payment of each MAC billing document in addition to the inland Government Bill of Lading.

With regard to the retrograde movement of unaccompanied baggage to CONUS from oversea areas, this Department is pursuing a program to improve such movement to the maximum feasible extent. In this connection, as you may be aware, we recently completed a service test whereby unaccompanied baggage from South Vietnam was moved via Through Government Bill of Lading carriers using MAC-controlled airlift to CONUS aerial ports. This system proved effective in expediting movement of this material, with concurrent distinct advantages to the Department of Defense and we are presently working with appropriate industry representatives to obtain such service at minimum costs on a continuing basis. Additional actions will be initiated by this office to encourage the maximum use of available airlift capacities to CONUS at minimum cost to the government.

Sincerely,

Thomas D. Morris

THOMAS D. MORRIS
Assistant Secretary of Defense
(Installations and Logistics)

U.S. GAO Wash., D.C.