

**Audit**



**Report**

OFFICE OF THE INSPECTOR GENERAL

**MANAGEMENT OF DOD AIR PASSENGER REQUIREMENTS**

Report No. 92-017

December 5, 1991

**Department of Defense**

The following acronyms are used in this report.

MAC . . . . .Military Airlift Command  
GSA . . . . .General Services Administration  
CONUS . . . . .continental United States  
OCONUS . . . . .outside continental United States  
ACL . . . . .allowable cabin load



INSPECTOR GENERAL  
DEPARTMENT OF DEFENSE  
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ARLINGTON, VIRGINIA 22202-2884

December 5, 1991

MEMORANDUM FOR ASSISTANT SECRETARY OF THE AIR FORCE (FINANCIAL  
MANAGEMENT AND COMPTROLLER)

SUBJECT: Audit Report on the Management of DoD Air Passenger  
Requirements (Report No. 92-017)

We are providing this final report for your review and comments since no comments were received to the draft report issued on August 28, 1991. The report addresses the Military Airlift Command's use of chartered and commercially scheduled aircraft for transporting international passengers.

DoD Directive 7650.3 requires that all audit recommendations be resolved promptly. Therefore, you must provide final comments on the recommendations and monetary benefits by February 5, 1992. DoD Directive 7650.3 also requires that comments indicate concurrence or nonconcurrence with the finding and each recommendation. If you concur, describe the corrective actions taken or planned, the completion dates of actions already taken, and the estimated date for completion of planned actions. If you nonconcur, state your specific reasons for each nonconcurrence. If appropriate, you may propose alternative methods for accomplishing desired improvements.

Recommendations and potential monetary benefits are subject to resolution in accordance with DoD Directive 7650.3 in the event of nonconcurrence or failure to comment. We also ask that your comments indicate concurrence or nonconcurrence with the internal control weakness highlighted in Part I.

The courtesies extended to the audit staff are appreciated. If you have any questions on this audit, please contact Mr. John S. Gebka at (703) 614-6206 (DSN 224-6206) or Mr. Billy T. Johnson at (703) 693-0630 (DSN 223-0630). The planned distribution of this report is listed in Appendix I.

A handwritten signature in cursive script, appearing to read "E. Jones".

Edward R. Jones  
Deputy Assistant Inspector General  
for Auditing

Enclosures

cc:  
Assistant Secretary of Defense (Production and Logistics)  
Secretary of the Air Force  
Commander in Chief, U.S. Transportation Command  
Commander, Military Traffic Management Command  
Commander, Military Airlift Command

Office of the Inspector General, DoD

AUDIT REPORT NO. 92-017  
(Project No. 0LC-0027)

December 5, 1991

MANAGEMENT OF DOD AIR PASSENGER REQUIREMENTS

EXECUTIVE SUMMARY

**Introduction.** The Military Airlift Command (MAC) is the designated DoD operating agency responsible for managing international airlift services for military personnel, military dependents, and employees of DoD and other U.S. Government agencies. MAC procures commercial airlift services between the continental United States (CONUS) and outside CONUS areas, including chartered service and scheduled service on commercial flights. MAC also provides transportation planning support to the Joint Chiefs of Staff, the Unified and Specified Commands, the Military Departments, and the Defense agencies. During CY 1989, MAC transported about 428,000 passengers aboard chartered aircraft at a cost of about \$162.6 million, and about 311,000 passengers on regularly scheduled commercial airlines at a cost of \$102.9 million.

**Objectives.** The objectives of the audit were:

- o to determine whether DoD was acquiring the appropriate number of seats on chartered and commercially scheduled aircraft,
- o to determine whether DoD was utilizing the available seats to efficiently transport DoD passengers, and
- o to evaluate applicable internal controls.

**Audit Results.** Overall, we determined that MAC was not acquiring the appropriate number of seats on chartered aircraft and commercially scheduled aircraft to transport DoD passengers. As a result, DoD incurred unnecessary costs of about \$11.7 million during CY 1989.

- o MAC did not achieve effective seat use on all chartered aircraft missions flown in CY 1989. As a result, MAC incurred unnecessary costs of about \$6.4 million (Finding A).

- o DoD incurred unnecessary costs for international passenger service on regularly scheduled commercial flights. Overall, DoD could have avoided costs of \$5.3 million by using more General Services Administration city pair seats in CY 1989 (Finding B).

**Internal Controls.** Internal controls were ineffective to ensure achievement of desired seat use goals. See Finding A for details on these weaknesses and Part I for details of our review of internal controls.

**Potential Benefits of Audit.** MAC can realize a cost avoidance of up to \$70.2 million during the 6-year Future Years Defense Program on its international passenger airlift operations (see Appendix G).

**Summary of Recommendations.** We recommended that regulations be amended, that charter aircraft service on underused channels be reduced, and that MAC discontinue purchasing seats that can be serviced by the General Services Administration city pairs at less cost.

**Management Comments.** No comments were received to the draft report issued on August 28, 1991. Therefore, we request comments from the Air Force Deputy Chief of Staff (Logistics) and the Commander, Military Airlift Command, by February 5, 1992.

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This report was prepared by the Logistics Support Directorate, Office of the Assistant Inspector General for Auditing, DoD. Copies of the report can be obtained from the Information Officer, Audit Planning and Technical Support Directorate (703) 693-0340 (DSN 223-0340).

## PART I - INTRODUCTION

### Background

DoD Directive 5160.2, "Single Manager Assignment for Airlift Services," October 17, 1973, designated the Military Airlift Command (MAC) as the DoD operating agency responsible for managing international airlift services for passengers. MAC procures commercial airlift service between the continental United States (CONUS) and outside the continental United States (OCONUS) for military personnel, military dependents, and employees of DoD and other U.S. Government agencies. The movement of passengers on commercial aircraft chartered by MAC is known as a category B airlift. The international movement of passengers aboard U.S. scheduled commercial airlines on blocks of seats purchased by MAC is known as a category Y airlift. MAC also provides transportation planning support to the Joint Chiefs of Staff, the Unified and Specified Commands, the Military Departments, and the Defense agencies.

### Objectives

The objectives of the audit were to determine if DoD was acquiring the appropriate number of seats on chartered and commercially scheduled aircraft and using the available seats to efficiently transport DoD passengers. We also evaluated applicable internal controls. The determination of whether DoD is recovering the cost to process space available passengers on DoD controlled aircraft and the internal controls over the collection and deposit of space available passenger fees are covered in the IG, DoD, Report No. 91-075, "Space Available Passenger Fees," May 3, 1991.

### Scope

During CY 1989, MAC transported about 428,000 international passengers on 956 missions over 75 channels aboard chartered commercial airlines (category B) at a cost of \$162.6 million. Each flight servicing all legs of a channel is known as a mission. An air channel identifies the specific CONUS and OCONUS locations that are provided international air passenger service. The segments of a channel between specific locations are known as legs. We selected a statistical random sample of 258 of the 956 category B missions (see Appendix A for sample methodology) to analyze seat use. The 258 missions were taken from 30 of the 75 channels MAC used in CY 1989. We obtained passenger data for each leg of the sample missions. We reviewed contracting and paying documentation for each selected mission to verify cost, distances flown, and contracted aircraft size.

In CY 1989, MAC transported about 311,000 passengers aboard scheduled U.S. commercial airlines (category Y) over 59 channels at a cost of \$102.9 million. We reviewed contracting and paying documentation to determine the number of seats purchased, the number of passengers flown over each channel, and the number of empty seats on each channel.

The IG, DoD, Audit Quantitative Methods Division provided specific sample selection criteria and guidance on channel selection to be analyzed.

This economy and efficiency audit was made from December 1989 through October 1990 in accordance with auditing standards issued by the Comptroller General of the United States as implemented by the Inspector General, DoD, and accordingly, included such tests of internal controls as were considered necessary. A list of the activities visited or contacted during the audit is in Appendix H.

### Internal Controls

The audit identified material internal control weaknesses as defined by Public Law 97-255, Office of Management and Budget Circular A-123, and DoD Directive 5010.38. We reviewed MAC's internal management reports and regulations on seat use goals. MAC was not achieving its seat use goals. Controls were ineffective because when category B aircraft did not achieve desired seat use goals, MAC did not analyze seat use. Additionally, Headquarters, U.S. Air Force, had not provided guidance to MAC on the evaluation of category B aircraft. Recommendations A.1.a., A.1.b., and A.2. in this report, if implemented, will correct the weaknesses. We have determined that the monetary benefits that can be realized by implementing the recommendations are \$38.4 million during the 6-year Future Years Defense Program. A copy of the final report will be provided to the senior official responsible for internal controls within the Air Force.

### Prior Audits and Other Reviews

The Assistant Inspector General for Inspections, DoD, issued Report No. 90-INS-02, "Commercial Passenger Airlift Operations," January 11, 1990. The report showed that the DoD passenger airlift requirements system did not provide for effective forecasting of user requirements. The report also determined that MAC had empty seats, valued at \$70.2 million, aboard category B and category Y aircraft during FY 1988. The report recommended that MAC improve the economy, efficiency, and accuracy of the long-term requirements process with special emphasis on full plane charter requirements and other commercial

alternatives that affect charter use. In its comments to the report, MAC stated that the monetary loss was caused by the requestor not using the seats rather than by invalid requirements.

The Air Force Audit Agency issued Report No. 3225210, "Review of International Passenger Airlift," May 21, 1985. The audit showed that overseas airlift was duplicated because other Military Departments scheduled their own airlift when MAC was available. The report recommended that DoD Directive 5160.2 be revised to require DoD Components to use MAC procured services. MAC concurred in the recommendations and requested that the Office of the Assistant Secretary of Defense (Production and Logistics) require DoD Components to process all international passenger traffic through MAC. The Directive was not modified by the Assistant Secretary of Defense (Production and Logistics).

## PART II - FINDINGS AND RECOMMENDATIONS

### A. USE OF CATEGORY B AIRLIFT

MAC did not achieve effective seat use on all category B missions flown in CY 1989. This condition occurred because Headquarters, U.S. Air Force, had not provided guidance to MAC and was not adequately analyzing and monitoring seat use on chartered aircraft. Additionally, it chartered too many aircraft and flew to locations where passenger volume did not justify the use of a chartered aircraft. By reducing charter service to underutilized locations, MAC could have avoided about \$6.4 million in charter aircraft costs in CY 1989.

### DISCUSSION OF DETAILS

#### Background

As the DoD single manager for international airlift service, MAC is authorized to charter commercial aircraft to move passengers over international air channels. The number of seats carriers make available on each type of chartered aircraft is known as the allowable cabin load (ACL). Channels are classified as either a frequency or a requirements channel. A frequency channel is established in response to a special request from a Military Department to support a mission sensitive area or to boost the morale of personnel in remote areas. A requirements channel is established based on the normal and recurring volume of passengers generated by the Military Departments. The cost of each chartered aircraft is determined by multiplying the mileage rate negotiated by MAC with the commercial airline carriers times the distance in miles covered by the channel times the ACL of the individual aircraft.

Joint Regulation, "Department of Defense Common User Airlift Transportation," August 20, 1982, (Air Force Regulation 76-38, Army Regulation 59-8, Navy Instruction 4630.18E, Marine Corps Order 4630.6D, and Defense Logistics Agency Regulation 4540.9) requires MAC to annually review frequency channels and identify those that do not meet seat use standards. If a frequency channel does not meet seat use standards, the requestor, Military Department or DoD Component, is to be notified and asked to provide justification for continuation of the channel's existence to Headquarters, United States Air Force. The Joint Regulation did not provide specific seat use standards or require evaluation of requirements channels.

MAC Regulation 173-1, "MAC Management System," July 20, 1989, provides outbound and inbound seat usage goals by channel for passengers traveling under permanent change of station or temporary duty orders (duty passengers). An outbound flight is on a channel originating in CONUS, while an inbound flight is on

a channel returning to OCONUS. The goal for travel outbound from the east coast of the United States was 94 percent. The inbound seat use goal for travel to the east coast of the United States was 90 percent. The goal for travel outbound from the west coast of the United States was 96 percent. The seat use goal for inbound travel to the west coast of the United States was 92 percent.

### MAC Analysis of Seat Use

MAC did not effectively analyze seat use on chartered aircraft over the entire channel. We attributed this to inadequate guidance in MAC Regulation 173-1. MAC calculated only average seat use on the over the ocean portions of each channel and did not calculate average seat use for intervening legs of missions. For example, on the channel providing outbound service from Philadelphia, Pennsylvania, to Rota, Spain, to Naples, Italy, to Sigonella, Italy, to Muharrag, Bahrain, MAC calculated only average seat use on the outbound leg from Philadelphia to Rota (the over the ocean portion on the channel). For the inbound service from Muharrag, to Sigonella, to Naples, to Rota, to Lajes, Azores Islands, to Philadelphia, MAC calculated average seat use on the inbound leg from Lajes to Philadelphia (the over the ocean portion of the channel). For this sample channel, MAC's computed average outbound seat use for all 13 missions flown in CY 1989 was 79.4 percent and the inbound seat use for the channel was 53.1 percent. Our analysis of seat use on the entire channel for five sample missions during CY 1989, which included the four outbound legs and the five inbound legs, showed that the average outbound and inbound seat use was 58.6 percent and 48.8 percent, respectively. MAC's analysis was incomplete and did not allow MAC to determine the effective seat use on missions over the entire channel.

According to internal management reports developed in response to MAC Regulation 173-1, MAC was not achieving its seat use goals in CY 1989. The outbound seat use goal of 94 percent eastbound and 96 percent westbound was not achieved during any of the months in CY 1989. During CY 1989, monthly average seat use for all outbound channels combined ranged from 78.2 to 94.0 percent of available seating capacity. The inbound seat use goal of 90 percent eastbound and 92 percent westbound was not achieved during any of the months in CY 1989. Monthly average seat use on all inbound channels combined ranged from 73.4 to 88.8 percent of available seating capacity.

During our review, we found no instances where MAC took any action to reduce the number of missions on a channel or obtain justification for continuance of a frequency channel when seat use goals were not being achieved. As described in our report, section Missions and leg segments, the Navy had a frequency

channel with an average seat use of 67.9 percent for the missions reviewed. No action was taken by MAC to reduce the number of missions or obtain justification for continuance of that channel.

### Audit Analysis of Seat Use

MAC can improve seat use of category B missions by reducing the number of missions on some channels and eliminating legs within some missions. Based on our analysis of seat use on a sample of 258 category B missions flown in CY 1989, we projected that MAC could have saved \$6.4 million by flying 40 fewer category B missions, costing \$3.8 million, and eliminating 158 unneeded legs within missions, costing \$2.6 million (Appendix B). Over the 6-year Future Years Defense Program, more effective use of chartered aircraft could result in a cost avoidance totaling up to \$38.4 million (6 times \$6.4 million).

Load factor. We developed a load factor, that represents a measure of mission effectiveness, to evaluate MAC's category B missions. Our load factor was based on the percentage of an aircraft's seating capacity being filled by duty passengers compared to the potential number of seats available over a given distance traveled. The actual number of miles traveled was used as a weighting element. For example, on a 50-seat passenger aircraft traveling 100 miles, there would be a potential of 5,000 passenger miles (50 passenger seats times 100 miles). If 35 passengers were aboard the aircraft, then 3,500 passenger miles were used. The load factor would be 70 percent (3,500 passenger miles divided by 5,000 passenger miles). The load factor can be calculated for any given distance or portion thereof and provides an indication of the effectiveness of a leg, mission, or series of missions on a channel.

Missions and leg segments. MAC had low average seat use on some missions and leg segments because an excessive number of flights were made. We calculated the load factor for 258 sample missions in 30 channels. Our analysis showed that 11 missions (Appendix C) and 38 leg segments (Appendix D) could have been eliminated in the sample missions. An example of unneeded missions occurred on the frequency channel of Norfolk, Virginia, to Guantanamo, Cuba, to Kingston, Jamaica, to Guantanamo, Cuba, and return to Norfolk, Virginia. A total of 2,126 duty passengers needed to be moved from January 6 through December 26, 1989, on 25 sample missions of this channel. The total ACL was 2,825 seats or an average capacity of 113 seats per aircraft. The average load factor for the 25 missions was only 67.9 percent. We determined that five missions could have been eliminated, which would have resulted in an average load factor of 94 percent (MAC's seat use goal) being achieved. The passenger volume for the entire 25 missions in our sample could have been consolidated and rescheduled into 20 missions, and more effective seat use on all missions could have been achieved.

An example of unneeded leg segments occurred on the channel from Philadelphia, Pennsylvania, to Aviano, Italy, to Sigonella, Italy, to Athens, Greece, to Adana, Turkey, to Athens, to Sigonella, to Aviano, and return to Philadelphia. Aircraft used on this channel had an ACL of 326 passengers. On the leg segment from Athens to Adana, passenger seat use on our five sample missions averaged 41 passengers per flight, and from Adana to Athens the average number of passengers per flight was 12. The existing leg segment between Greece and Turkey did not justify the use of chartered aircraft with an ACL of 326 seats. Service to Adana could be satisfied by scheduling a stop in Adana on an existing channel that used aircraft that had an ACL of 145 passengers. The alternate channel had missions that flew from Athens, Greece, to Muharraq, Bahrain. By adding a stop in Adana, Turkey, between Greece and Bahrain, the flight could provide sufficient capacity to provide service to Adana, Turkey. The alternate channel had 29 missions scheduled in CY 1989, while the sampled channel served Adana with only 11 missions.

Need for improved analysis. MAC's accumulation of raw passenger statistics, without complete analysis and management action, caused aircraft chartered by MAC to be underutilized. Better analysis and decisionmaking is needed to eliminate unneeded missions and reduce flights to locations where passenger volume does not justify the use of chartered aircraft.

#### RECOMMENDATIONS FOR CORRECTIVE ACTIONS

1. We recommend that the Deputy Chief of Staff (Logistics), Headquarters, U.S. Air Force amend Air Force Regulation 76-38, "DoD Common User Airlift Transportation," to:
  - a. Provide seat use standards for chartered aircraft, which apply to entire missions flown on both frequency and requirements channels,
  - b. Require that the Military Airlift Command at least annually review seat use on requirements channels and reduce missions or leg segments on channels where seat use standards are not achieved.
2. We recommend that the Commander, Military Airlift Command, provide the Deputy Chief of Staff (Logistics), Headquarters, U.S. Air Force, with the frequency channels that are not achieving seat use standards on category B missions for submission to the Military Department or the DoD Component for reevaluation and justification.

MANAGEMENT COMMENTS AND AUDIT RESPONSE

A copy of the draft report was issued to the Assistant Secretary of the Air Force (Financial Management and Comptroller) on August 28, 1991. As of November 25, 1991, the Air Force had not responded to the report. Therefore, we request comments from the Deputy Chief of Staff (Logistics) Headquarters, United States Air Force and the Commander, Military Airlift Command by February 5, 1992.

## B. USE OF CATEGORY Y AIRLIFT

DoD was incurring unnecessary costs for international passenger service on regularly scheduled commercial flights. This occurred because DoD, through the MAC, provided commercial international (category Y) passenger service on channels that duplicated channels covered by the General Services Administration (GSA) under the international "city pairs" program. By using the GSA city pairs program instead of MAC's category Y service, DoD could have realized a cost avoidance of about \$5.3 million in CY 1989 on selected channels. Further cost reductions are likely if DoD provides passenger volume data to GSA for use during negotiations with carriers and if DoD requests GSA to expand city pairs service to additional international channels for use by DoD passengers.

### DISCUSSION OF DETAILS

#### Background

DoD Directive 4500.9, "Transportation and Traffic Management," January 26, 1989, requires that MAC-contracted seats be used by DoD passengers for international travel when MAC has seats available to meet mission requirements. One type of contract airlift provided by MAC is category Y. MAC establishes category Y airlift by negotiating contracts with U.S. commercial airline carriers that give MAC the right to purchase blocks of seats, at reduced fares, on regularly scheduled international commercial flights. The seats are on channels frequently used by DoD passengers. Contract provisions require that MAC purchase blocks of seats no later than 120 days before the first day of the month in which the seats will be used. As needed, MAC was allowed to purchase additional seats at the same price if they were available. The number of seats purchased is primarily based on MAC's historical knowledge of DoD passenger volume on a specific channel. MAC must pay for all category Y seats purchased whether or not the seats are actually used by DoD passengers.

To obtain a category Y seat, DoD passengers must have their local Government travel office make reservations through MAC. The DoD Component that authorizes the passenger's trip reimburses MAC for the category Y seat when it is used. MAC's charge to the DoD Component includes the negotiated contract fare plus a markup to cover the administrative costs incurred by MAC to provide the category Y service. This charge did not include the cost of the unused seats.

When MAC contract airlift service is not available, DoD Components are authorized to arrange alternative transportation through MAC, or directly with commercial carriers, consistent with DoD and Military Department traffic management policy. One alternative available to DoD passengers is the city pairs program administered by GSA.

Under the city pairs program, GSA solicits U.S. commercial aircraft carriers to obtain the lowest possible contract fare, which then is made available to all Government passengers (DoD and non-DoD) on regularly scheduled international flights of a U.S. carrier operating between a specific city pair (for example, Washington, DC and Frankfurt, Germany). GSA does not guarantee the commercial airline payment for a specific number of seats under the city pairs program. The commercial airline is paid only for the seats that are actually used. DoD passengers usually obtain a GSA city pair fare through a travel agent contractor that provides reservation and ticketing services to the passengers' local activity. The contractor is reimbursed by the passengers' DoD Component for the contract fare established by GSA. The contractor reimburses the airline after deducting a commission for providing the travel service.

### Duplication

Passengers traveling for the U.S. Government on category Y or GSA city pairs were being transported on the same international flights at different contract fares. MAC and GSA were separately negotiating contract fares with identical U.S. commercial airlines for use by U.S. Government passengers on the same international channels. Both GSA and MAC were administering separate programs to achieve the common goal of transporting international passengers at the lowest cost to the Government while meeting mission requirements. Because MAC and GSA operated independently of each other, neither had the benefit of using total Government passenger volume when negotiating international contract fares with U.S. airlines. MAC negotiated category Y fares primarily for the exclusive use of DoD international passengers. GSA negotiated city pair fares for use by international passengers from all Government agencies. DoD international passengers also used the city pair fares when they could not obtain or did not attempt to obtain a category Y fare through MAC. In CY 1989, MAC negotiated category Y fares on 59 international channels. GSA established city pair fares on 40 of these channels. Duplicated category Y and GSA city pairs channels are identified by an asterisk in Appendix E.

### Cost Comparison

DoD could reduce its costs for international travel by limiting MAC's category Y channels to those cities where DoD's effective seat costs are below GSA city pair fares. On 19 of the 40 category Y channels that duplicated GSA city pair channels, MAC's effective seat cost exceeded the GSA city pair fares by a total of \$5.3 million (Appendix F). Over the 6-year Future Years Defense Program, greater reliance on the current GSA city pairs program by DoD could result in cost avoidance totaling \$31.8 million (6 times \$5.3 million).

On the remaining 21 duplicate channels, GSA city pair fares exceeded MAC's effective seat costs by \$1.9 million. However, the GSA city pair fares were obtained on all 40 of these channels without the benefit of category Y passenger volume when the GSA city pair fare was solicited. For the 19 category Y channels that were not duplicated, GSA officials indicated that it would be possible to establish city pairs service on these channels because of the DoD volume of passengers and the level of competition among carriers.

Category Y Cost

The fare MAC charged for a category Y seat understated the actual costs incurred by DoD. MAC charged category Y passengers a DoD tariff rate fare, which was the amount MAC paid the commercial carriers for a category Y seat plus a markup to cover overhead and operating cost to run the category Y program. MAC did not have a uniform method of allocating overhead and operating costs to any of the channels it served. Our review of the 59 category Y channels disclosed that the overhead and operating cost applied by MAC ranged from a high of \$150 to a low of \$36. This did not represent the actual cost incurred by MAC because many available seats purchased were never used by paying passengers. The cost of these empty seats was not included in the overhead and operating costs. During CY 1989, MAC had over 46,600 unused seats at a cost of about \$13.8 million over all channels served by the category Y program. To determine the effective seat cost over each channel, we prorated the empty seat cost over the actual passenger seats used, to determine the total cost paid to carriers per seat used. We added MAC's markup to this adjusted seat cost to determine the effective seat cost to DoD. For example, on the channel, Washington, District of Columbia, to Frankfurt, Germany, the MAC fare to DoD activities was \$312 per passenger, while the GSA city pairs rate was \$278, a net difference of \$34 per seat. However, MAC purchased 33,910 seats and moved only 30,974 passengers, which means that 2,936 seats costing \$695,832 were never used by DoD passengers. The effective seat cost to DoD was \$334, which consisted of the following.

ILLUSTRATION OF EFFECTIVE SEAT COST

<u>Cost Elements</u>	<u>Amount</u>
Negotiated per seat cost	\$237
MAC's overhead and operating cost	75
Empty seat cost	<u>22</u>
Total Cost to DoD	<u>\$334</u>

Therefore, in comparing the DoD effective seat cost of \$334 to the GSA city pairs fare of \$278, there was a cost difference of \$56 per seat.

### Using GSA International City Pairs

Some DoD activities used lower price GSA international city pairs and other discount seats instead of attempting to book category Y seats through MAC. While this was not in accordance with DoD Directive 4500.9, local DoD transportation officials evaluated cost alternatives and chose the overall lowest cost carrier to the activity. Our analysis of 557 travel records at 15 DoD activities showed that MAC was contacted on only 140 (25 percent) of the trips to obtain a category Y seat. Of the 15 activities, 2 never contacted MAC, and used GSA city pair fares for international passengers. DoD travel agent contractors made the reservations. Of the 557 records reviewed, 283 (51 percent) of the international trips were made using GSA city pairs.

### Consolidation of Requirements

Both MAC and GSA's estimated passenger volume should be consolidated to allow GSA to use category Y passenger estimates in its solicitation to negotiate favorable city pairs rates. GSA solicited regularly scheduled U.S. commercial carriers for bids based on the estimated international monthly passenger volume over the international channels. GSA selected one or more contract carrier(s) based on the lowest rate, the quality of service given, and how well the contract carrier met the traveler's requirements. GSA officials stated that their solicitation was based on an estimated monthly average of 400 passengers per channel, which excluded DoD category Y passenger volume. Category Y passenger volume over the 40 duplicated channels averaged about 551 passengers per month. Both the Military Traffic Management Command and GSA officials indicated that an increase in estimated monthly passenger volume could result in more favorable GSA city pairs rates over the 40 duplicated category Y channels. In addition, GSA officials stated that city pairs channels could be established over the remaining 19 nonduplicated category Y channels (see Appendix E).

### RECOMMENDATIONS FOR CORRECTIVE ACTION

We recommend that the Commander, Military Airlift Command (MAC):

1. Provide DoD passenger volume to the General Services Administration (GSA) on all category Y channels,
2. Discontinue contracting for category Y services when services provided by GSA city pairs cost less, and

3. Request GSA to establish service for MAC on the category Y channels that are not served by the GSA city pairs program when cost effective.

MANAGEMENT COMMENTS AND AUDIT RESPONSE

A copy of the draft report was issued to the Assistant Secretary of the Air Force (Financial Management and Comptroller) on August 28, 1991. As of November 25, 1991, management had not responded to the report. Therefore, we request comments from the Commander, Military Airlift Command, by February 5, 1992.

PART III - ADDITIONAL INFORMATION

- APPENDIX A - Category B Sample Methodology
- APPENDIX B - Reduction of Missions and Legs Based on Category B Sample Results
- APPENDIX C - Sample Missions That Could Be Eliminated
- APPENDIX D - Sample Leg Segments That Could Be Eliminated
- APPENDIX E - Schedule of Category Y Seat Use and Duplicated Channels
- APPENDIX F - Comparison of Category Y and General Services Administration City Pairs Program Costs
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- APPENDIX H - Activities Visited or Contacted
- APPENDIX I - Report Distribution

## APPENDIX A. CATEGORY B SAMPLE METHODOLOGY

We identified a universe of 956 missions flown on 75 channels (mission series), for which MAC had contracted for passenger airlift in CY 1989. We used a 2-stage statistical random sample by first stratifying the 75 channels into 4 strata based on the number of missions and legs that had been flown in each channel as follows.

<u>Strata</u>	<u>Missions per Channel</u>	<u>Number of Channels</u>	<u>Number of Missions</u>	<u>Number of Legs</u>
Stratum 1	70 and above	2	155	480
Stratum 2	30 to 69	7	275	1,164
Stratum 3	10 to 29	24	404	2,239
Stratum 4	1 to 9	<u>42</u>	<u>122</u>	<u>469</u>
Total		<u>75</u>	<u>956</u>	<u>4,352</u>

We then selected a sample of missions and legs from the strata as follows.

<u>Strata</u>	<u>Channels in Sample</u>	<u>Mission Sample Size</u>	<u>Number of Sample Legs</u>
Stratum 1	2	50	150
Stratum 2	7	105	435
Stratum 3	15	88	504
Stratum 4	<u>6</u>	<u>15</u>	<u>53</u>
Total	<u>30</u>	<u>258</u>	<u>1,142</u>

The sample was a 2-stage selection process and was used for making the projections over the universe of 956 missions and 4,352 legs in CY 1989, based on the respective samples of 258 missions and 1,142 legs. The statistical analysis was performed using a 95-percent confidence level in the projections. The margin of error was estimated within + 50.0 percent for the missions and + 69.5 percent for the corresponding dollar values. The margin of error for the legs was + 27.2 percent and + 31.4 percent for the corresponding dollar values.

**APPENDIX B. REDUCTION OF MISSIONS AND LEGS BASED ON CATEGORY B  
SAMPLE RESULTS**

Strata	Universe				Sample			
	Channels	Missions	Legs	Cost	Channels	Missions	Legs	Cost
I	2	155	480	\$ 4,914,984	2	50	150	\$ 1,607,915
II	7	275	1,164	52,228,375	7	105	435	20,166,399
III	24	404	2,239	96,850,710	15	88	504	19,805,782
IV	<u>42</u>	<u>122</u>	<u>469</u>	<u>8,605,931</u>	<u>6</u>	<u>15</u>	<u>53</u>	<u>4,200,309</u>
Total	<u>75</u>	<u>956</u>	<u>4,352</u>	<u>\$162,600,000</u>	<u>30</u>	<u>258</u>	<u>1,142</u>	<u>\$45,780,405</u>

Strata	Sample Results				Projected Results			
	Deleted Missions		Deleted Legs		Deleted Missions		Deleted Legs	
	Missions	Cost	Legs	Cost	Missions	Cost	Legs	Cost
I	6	\$ 174,326	0	\$ 0	19	\$ 540,411	0	\$ 0
II	1	171,416	6	106,332	3	448,947	16	284,530
III	4	605,329	32	518,734	18	2,779,010	142	2,304,455
IV	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	<u>11</u>	<u>\$951,071</u>	<u>38</u>	<u>\$625,066</u>	<u>40</u>	<u>\$3,768,368</u>	<u>158</u>	<u>\$2,588,985</u>

**APPENDIX C. SAMPLE MISSIONS THAT COULD BE ELIMINATED**

<u>Channel</u>	<u>Sample Size</u>	<u>Number of Missions to be Eliminated</u>	<u>Mission Cost</u>	<u>Total Cost</u>
Norfolk Naval Air Station, VA, to Guantanamo, Cuba, to Kingston, Jamaica, and return (F)	25	5	\$ 27,521	\$137,605
Charleston, SC, to Balboa, Panama, and return (F)	25	1	36,721	36,721
Charleston, SC, to Frankfurt, Germany, to Philadelphia, PA, to Charleston, SC (R)	15	1	171,416	171,416
Norfolk International Airport, VA, to Guantanamo, Cuba, to Kingston, Jamaica, and return (F)	6	1	27,877	27,877
Norfolk Naval Air Station, VA, to Philadelphia, PA, to Naples, Italy, to Athens, Greece, to Muharraq, Bahrain, to Diego Garcia Atoll, to Muharraq to Athens, to Naples, to Frankfurt, Germany, to Philadelphia, to Norfolk Naval Air Station (R/F)	10	1	171,642	171,642
Philadelphia, PA, to Aviano, Italy, to Sigonella Airport, Italy, to Athens, Greece, to Adana, Turkey, and return (R/F)	<u>5</u>	<u>2</u>	202,905	<u>405,810</u>
Totals	<u>86</u>	<u>11</u>		<u>\$951,071</u>

F= Frequency Channel

R= Requirements Channel

**APPENDIX D. SAMPLE LEG SEGMENTS THAT COULD BE ELIMINATED**

<u>Channel</u>	<u>Sample Size</u>	<u>Number of Legs to be Eliminated</u>	<u>Leg Cost</u>	<u>Total Cost</u>
St. Louis, MO, to Oakland, CA, to Yokota, Japan, to Osan, Korea and return (R)	15	6	\$17,722	\$106,332
St. Louis, MO, to Los Angeles, CA, to Yokota, Japan, to Osan, Korea, and return (R)	5	2	14,408	28,816
Philadelphia, PA, to Rota, Spain, to Naples, Italy, to Sigonella, Italy, to Muharraq, Bahrain, to Sigonella, to Naples, to Rota, to Lajes, Azores, to Philadelphia (F)	5	4	37,669	150,676
Norfolk Naval Air Station, VA, to Philadelphia, PA, to Naples, Italy, to Athens, Greece, to Muharraq, Bahrain, to Diego Garcia Atoll, to Muharraq, to Athens, to Naples, to Frankfurt, Germany, to Philadelphia to Norfolk Naval Air Station (R/F)	10	8	20,619	164,952
Philadelphia, PA, to Aviano, Italy, to Sigonella, Italy, to Athens, Greece, to Adana, Turkey, and return (R/F)	5	6	10,010	60,062 <sup>1/</sup>
Philadelphia, PA, to Lajes, Azores, to Aviano, Italy, to Sigonella, Italy, to Athens, Greece, to Adana, Turkey, to Athens, Sigonella, Lajes, Philadelphia (R)	<u>5</u>	<u>12</u>	9,519 <sup>2/</sup>	<u>114,228</u>
Totals	<u>45</u>	<u>38</u>		<u>\$625,066</u>

<sup>1/</sup> This is the net savings of moving a leg segment from this channel to another and the leg reduction was considered in our projections.

<sup>2/</sup> Average leg segment cost

F= Frequency Channel

R= Requirements Channel

**APPENDIX E. SCHEDULE OF CATEGORY Y SEAT USE AND DUPLICATED CHANNELS**

<u>Category Y Channel (Commercial Airports)</u>	<u>Seats Purchased</u>	<u>Seats Used</u>	<u>Percentage of Seats Used to Seats Purchased</u>	<u>Category Y Average Monthly Passenger Volume</u>
Washington to Frankfurt*	33,910	30,974	.91	2,581
Atlanta to Frankfurt*	24,459	22,991	.94	1,916
John F. Kennedy to Frankfurt*	23,638	21,270	.90	1,772
John F. Kennedy to London*	23,629	20,909	.88	1,742
Dallas to Frankfurt*	21,326	19,715	.92	1,643
St. Louis to Frankfurt	13,467	12,126	.90	1,010
John F. Kennedy to Madrid*	11,105	9,650	.87	804
Chicago to Seoul*	9,843	8,665	.88	722
San Francisco to Guam*	9,720	8,002	.82	667
Los Angeles to Frankfurt*	8,795	7,639	.87	637
Atlanta to London*	8,420	7,614	.90	634
Seattle to Seoul*	8,064	6,909	.86	576
John F. Kennedy to Munich*	7,767	6,940	.89	578
Los Angeles to Seoul*	7,593	6,843	.90	570
Washington to London*	7,045	6,058	.86	505
San Francisco to Frankfurt	6,991	6,293	.90	524
John F. Kennedy to Hamburg*	6,804	5,941	.87	495
Washington to Seoul*	6,743	5,737	.85	478
Dallas to London*	6,455	5,692	.88	474
John F. Kennedy to Nuremberg	6,410	5,596	.87	466
San Francisco to Seoul*	6,135	5,221	.85	435
Los Angeles to Narita*	6,108	5,193	.85	433
John F. Kennedy to Stuttgart*	5,971	5,313	.89	443
San Francisco to Narita*	5,904	5,211	.88	434
Chicago to Narita*	5,705	4,994	.88	416
Boston to Frankfurt*	5,440	4,709	.87	392
Honolulu to Narita*	4,920	4,079	.83	340
San Francisco to Manila*	4,775	3,871	.81	323
Los Angeles to Okinawa	3,895	3,106	.80	259
Chicago to Manila*	3,885	3,214	.83	268
San Francisco to Okinawa	3,818	3,256	.85	271
Seattle to Narita*	3,705	3,164	.85	264
Los Angeles to Guam*	3,608	2,787	.77	232
Honolulu to Seoul	3,518	2,596	.74	216
Washington to Nuremberg	3,505	3,006	.86	250
Los Angeles to Manila*	3,307	2,744	.83	229
San Francisco to London	<u>2,990</u>	<u>2,343</u>	.78	<u>195</u>
Subtotal	<u>329,373</u>	<u>290,371</u>		<u>21,003</u>

\* These channels have both category Y and GSA city pairs passenger service.

**APPENDIX E. SCHEDULE OF CATEGORY Y SEAT USE AND DUPLICATED CHANNELS (cont'd.)**

<u>Category Y Channel (Commercial Airports)</u>	<u>Seats Purchased</u>	<u>Seats Used</u>	<u>Percentage of Seats Used to Seats Purchased</u>	<u>Category Y Average Monthly Passenger Volume</u>
Subtotal	329,373	290,371		21,003
Los Angeles to London*	2,990	2,215	.74	185
Washington to Stuttgart*	2,949	2,268	.77	189
Boston to London*	2,646	1,745	.66	145
Honolulu to Okinawa	2,628	2,092	.80	174
Honolulu to Guam*	2,005	1,598	.80	133
Washington to Narita*	1,844	1,415	.77	118
Los Angeles to Osan	1,812	1,412	.78	118
Washington to Munich*	1,685	1,104	.66	92
Honolulu to Manila	1,580	1,139	.72	95
Seattle to Manila*	1,560	1,150	.74	96
St. Louis to Seoul	1,185	980	.83	82
St. Louis to Narita	910	696	.76	58
John F. Kennedy to Rome*	767	469	.61	39
Guam to Manila	715	324	.45	27
John F. Kennedy to Milan*	679	494	.73	41
Dallas to Manila	590	388	.66	32
St. Louis to Manila	580	397	.68	33
Philadelphia to Frankfurt	365	305	.84	25
Boston to Prestwick	240	159	.66	13
Washington to Rome*	181	63	.35	5
Washington to Milan*	120	8	.07	1
San Francisco to Osan	115	86	.75	7
Total	<u>357,519</u>	<u>310,878</u>		<u>25,907</u>

\* These channels have both category Y and GSA city pairs passenger service.

APPENDIX F. COMPARISON OF CATEGORY Y AND GENERAL SERVICES ADMINISTRATION CITY PAIRS PROGRAM COSTS

<u>Category Y Channel (Commercial Airports)</u>	<u>Total Category Y Cost to DoD</u> <u>1/</u>	<u>Total GSA City Pair Cost to DoD</u> <u>2/</u>	<u>Potential Cost Avoidance to DoD</u> <u>3/</u>
Washington to Frankfurt	\$10,345,316	\$ 9,570,966	\$ 774,350
Dallas to Frankfurt	7,866,285	7,333,980	532,305
San Francisco to Guam	3,968,992	2,992,748	976,244
Los Angeles to Frankfurt	3,880,612	3,154,907	725,705
New York to Madrid	3,474,000	3,367,850	106,150
San Francisco to Manila	2,245,180	1,873,564	371,616
Chicago to Manila	2,240,158	2,153,380	86,778
Los Angeles to Manila	1,643,656	1,344,560	299,096
Los Angeles to Guam	1,468,749	1,059,060	409,689
Los Angeles to London	1,196,100	874,925	321,175
Washington to Stuttgart	884,520	811,944	72,576
Seattle to Manila	745,200	617,550	127,650
Boston to London	619,475	609,005	10,470
Honolulu to Guam	580,074	404,294	175,780
Washington to Munich	504,528	395,232	109,296
New York to Rome	260,764	165,557	95,207
New York to Milan	225,264	171,418	53,846
Washington to Rome	55,251	24,318	30,933
Washington to Milan	<u>30,488</u>	<u>3,104</u>	<u>27,384</u>
Total	<u>\$42,234,612</u>	<u>\$36,928,362</u>	<u>\$5,306,250</u>

1/ MAC's payments to carriers, unused seat costs, and markup for passengers on each channel.

2/ GSA city pair cost (average between standard and discount fares offered by GSA on each channel) if DoD passengers had used GSA city pair fares.

3/ Total cost to DoD less total GSA city pair cost.

**APPENDIX G. SUMMARY OF POTENTIAL MONETARY AND OTHER BENEFITS  
RESULTING FROM AUDIT**

<u>Recommendation Reference</u>	<u>Description of Benefit</u>	<u>Amount and/or Type of Benefit</u>
A.1.a. through A.2.	<u>Internal Control -</u> By establishing seat use standards and reducing unnecessary missions and leg segments, seat use can be improved on chartered aircraft.	<u>Funds Put to Better Use.</u> An estimated \$6.4 million for CY 1989 (\$4.8 million for FY 1989 Fund Account 57X4922.0030 689 6594 111300 58910 VBZ 525300 and \$1.6 million for FY 1990 Fund Account 57X4922.0030 680 6594 111300 58910 VBZ 525300) in category B missions costs could have been avoided. Over the 6-year Future Years Defense Program, the cost avoidance is \$38.4 million (6 times \$6.4 million).
B.1. through B.3.	<u>Economy and Efficiency -</u> By providing GSA with DoD passenger volume on all category Y channels, lower city pair fares can be obtained and city pair channels can be established where none exist. Use of the lower cost city pair channels would reduce transportation costs for DoD international air passengers.	<u>Funds Put to Better Use.</u> An estimated \$5.3 million for CY 1989 (\$4.0 million for FY 1989 Fund Account 57X4922.0030 689 6594 111300 58910 VBZ 525300 and \$1.3 million for FY 1990 Fund Account 57X4922.0030 680 6594 111300 58910 VBZ 525300) in costs could have been avoided. Over

APPENDIX G. SUMMARY OF POTENTIAL MONETARY AND OTHER BENEFITS  
RESULTING FROM AUDIT (cont'd.)

<u>Recommendation Reference</u>	<u>Description of Benefit</u>	<u>Amount and/or Type of Benefit</u>
B.1. through B.3. (cont'd.)		the 6-year Future Years Defense Program, the cost avoidance is \$31.8 million (6 times \$5.3 million).

APPENDIX H. ACTIVITIES VISITED OR CONTACTED

Office of the Secretary of Defense

Assistant Secretary of Defense (Production and Logistics),  
Washington, DC

Unified Command

Headquarters, U.S. Transportation Command,  
Scott Air Force Base, IL

Department of the Army

Chief of Staff, Director of Transportation, Energy, and Troop  
Support, Washington, DC

Headquarters, Military Traffic Management Command,  
Falls Church, VA

Transportation Division, Directorate of Logistics,  
Ft. George G. Meade, MD

Maintenance and Transportation Division, Directorate of  
Installation Logistics, U.S. Army Garrison, Ft. Monmouth, NJ

U.S. Army Testing and Evaluation Command,  
Aberdeen Proving Grounds, MD

Transportation Division, Directorate of Logistics, U.S. Army  
Training Center and Ft. Dix, NJ

Transportation Management Branch, Directorate of Logistics,  
Headquarters, Ft. Carson and 4th Infantry Division  
(Mechanized), CO

Department of the Navy

Deputy Chief of Naval Operations (Logistics), Washington, DC

Naval Military Personnel Command, Arlington, VA

Personnel Support Activity, Norfolk Naval Base, VA

Personnel Support Activity, Long Beach Naval Base, CA

Department of the Air Force

Chief of Staff, Air Force, Directorate of Transportation,  
Washington, DC

Headquarters, Military Airlift Command, Scott Air Force Base, IL

375th Transportation Squadron, Scott Air Force Base, IL

438th Aerial Port Squadron, McGuire Air Force Base, NJ

Directorate of Distribution for Travel, Kelly Air Force Base, TX

Traffic Management Office, Los Angeles Air Force Base, CA

56th Tactical Training Wing, McDill Air Force Base, FL

1606 Air Base Wing, Transportation, Kirkland Air Force Base, NM

APPENDIX H. ACTIVITIES VISITED OR CONTACTED (cont'd.)

Marine Corps

Headquarters, U.S. Marine Corps, Installation and Logistics  
Department, Arlington, VA  
Traffic Management Branch, Directorate of Logistics, Marine Corps  
Command Development Center, Quantico, VA  
Port Call and Embarkation Selections, Marine Corps Movement  
Coordination Center, Camp Pendleton, CA  
Traffic Management Office, Directorate of Logistics,  
Camp Pendleton, CA

Defense Agencies

Defense Nuclear Agency, Alexandria, VA

Non-DoD Activities

General Services Administration, Washington, DC  
Lambert Field, St. Louis International Airport, St. Louis, MO  
Philadelphia International Airport, Philadelphia, PA

## APPENDIX I. REPORT DISTRIBUTION

### Office of the Secretary of Defense

Assistant Secretary of Defense (Production and Logistics)  
Assistant Secretary of Defense (Public Affairs)  
Comptroller of the Department of Defense

### Department of the Army

Secretary of the Army  
Assistant Secretary of the Army (Financial Management)

### Department of the Navy

Secretary of the Navy  
Assistant Secretary of the Navy (Financial Management)  
Auditor General, Naval Audit Service

### Department of the Air Force

Secretary of the Air Force  
Assistant Secretary of the Air Force (Financial Management  
and Comptroller)  
Commander, Military Airlift Command  
Air Force Audit Agency

### Defense Agencies

Director, Defense Contract Audit Agency  
Director, Defense Logistics Agency  
Director, Defense Logistics Studies Information Exchange

### Other Defense Activities

Commander-in-Chief, U.S. Transportation Command

### Non-DoD Activities

Office of Management and Budget  
U.S. General Accounting Office,  
NSIAD Technical Information Center  
General Services Administration

APPENDIX I. REPORT DISTRIBUTION (cont'd.)

Congressional Committees:

Senate Subcommittee on Defense, Committee on Appropriations  
Senate Committee on Armed Services  
Senate Committee on Governmental Affairs  
Senate Ranking Minority Member, Committee on Armed Services  
House Committee on Appropriations  
House Subcommittee on Defense, Committee on Appropriations  
House Ranking Minority Member, Committee on Appropriations  
House Committee on Armed Services  
House Committee on Government Operations  
House Subcommittee on Legislation and National Security,  
Committee on Government Operations

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