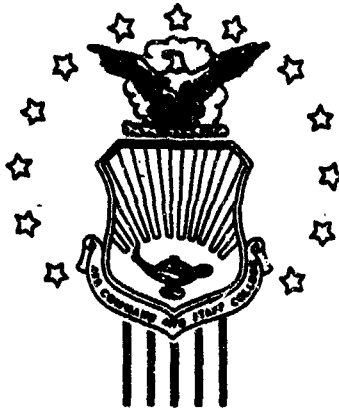


AD-A195 036

DTIC FILE COPY

2

DTIC
ELECTE
JUN 08 1988



**AIR COMMAND
AND
STAFF COLLEGE**

STUDENT REPORT

POWER PROJECTION THROUGH AIRLIFT:
AN ARMY PERSPECTIVE

MAJOR RALPH E. GRIFFITH 88-1110

"insights into tomorrow"

DISTRIBUTION STATEMENT A
Approved for public release
Distribution Unlimited

88 5 81 127

DISCLAIMER

The views and conclusions expressed in this document are those of the author. They are not intended and should not be thought to represent official ideas, attitudes, or policies of any agency of the United States Government. The author has not had special access to official information or ideas and has employed only open-source material available to any writer on this subject.

This document is the property of the United States Government. It is available for distribution to the general public. A loan copy of the document may be obtained from the Air University Interlibrary Loan Service (AUL/LDEX, Maxwell AFB, Alabama, 36112-5564) or the Defense Technical Information Center. Request must include the author's name and complete title of the study.

This document may be reproduced for use in other research reports or educational pursuits contingent upon the following stipulations:

- Reproduction rights do not extend to any copyrighted material that may be contained in the research report.

- All reproduced copies must contain the following credit line: "Reprinted by permission of the Air Command and Staff College."

- All reproduced copies must contain the name(s) of the report's author(s).

- If format modification is necessary to better serve the user's needs, adjustments may be made to this report--this authorization does not extend to copyrighted information or material. The following statement must accompany the modified document: "Adapted from Air Command and Staff College Research Report _____ (number) entitled _____ (title) _____ by _____ (author)."

- This notice must be included with any reproduced or adapted portions of this document.



REPORT NUMBER 88-1110
TITLE POWER PROJECTION THROUGH AIRLIFT: AN ARMY PERSPECTIVE

AUTHOR(S) MAJOR RALPH E. GRIFFITH, USA

FACULTY ADVISOR MAJOR C. PALMER VOYLES, ACSC/3824 STUS

SPONSOR LIEUTENANT COLONEL JOE GESKER, LA10, DAA

Submitted to the faculty in partial fulfillment of
requirements for graduation.

AIR COMMAND AND STAFF COLLEGE
AIR UNIVERSITY
MAXWELL AFB, AL 36112-5542

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED		1b. RESTRICTIVE MARKINGS	
2a. SECURITY CLASSIFICATION AUTHORITY		3. DISTRIBUTION / AVAILABILITY OF REPORT STATEMENT A Approved for public release; Distribution is unlimited.	
2b. DECLASSIFICATION / DOWNGRADING SCHEDULE			
4. PERFORMING ORGANIZATION REPORT NUMBER(S) 88-1110		5. MONITORING ORGANIZATION REPORT NUMBER(S)	
6a. NAME OF PERFORMING ORGANIZATION ACSC/EDC	6b. OFFICE SYMBOL (If applicable)	7a. NAME OF MONITORING ORGANIZATION	
6c. ADDRESS (City, State, and ZIP Code) Maxwell AFB AL 36112-5542		7b. ADDRESS (City, State, and ZIP Code)	
8a. NAME OF FUNDING / SPONSORING ORGANIZATION	8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER	
8c. ADDRESS (City, State, and ZIP Code)		10. SOURCE OF FUNDING NUMBERS	
		PROGRAM ELEMENT NO.	PROJECT NO.
		TASK NO.	WORK UNIT ACCESSION NO.
11. TITLE (Include Security Classification) POWER PROJECTION THROUGH AIRLIFT: AN ARMY PERSPECTIVE			
12. PERSONAL AUTHOR(S) Griffith, Ralph E., Major, USA			
13a. TYPE OF REPORT	13b. TIME COVERED FROM _____ TO _____	14. DATE OF REPORT (Year, Month, Day) 1988 April	15. PAGE COUNT 21
16. SUPPLEMENTARY NOTATION			
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)
FIELD	GROUP	SUB-GROUP	
19. ABSTRACT (Continue on reverse if necessary and identify by block number) The ability of the United States to deter aggression, limit conflict, or wage war successfully depends on our ability to rapidly deploy, employ, and sustain general purpose forces. Airlift provides us that capability though shortfalls exist with regard to this national asset. Finite resources dictate users employ these resources effectively and efficiently. This paper will examine airlift support requirements, shortfalls, identify Army contributions to shortfalls, and review Army-unique programs designed to counter shortfall contributions.			
20. DISTRIBUTION / AVAILABILITY OF ABSTRACT <input type="checkbox"/> UNCLASSIFIED/UNLIMITED <input checked="" type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS		21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED	
22a. NAME OF RESPONSIBLE INDIVIDUAL ACSC/EDC Maxwell AFB AL 36112-5542		22b. TELEPHONE (Include Area Code) (205) 293-2867	22c. OFFICE SYMBOL

PREFACE

The ability of the United States to deter aggression, limit conflict, or wage war successfully depends intensively on our ability to rapidly deploy, employ, and sustain general purpose forces. Our global strategy demands the forward stationing of forces in peacetime, the forward positioning of equipment for continental U.S.-based forces, and the capability to rapidly reinforce with troops, equipment, and supplies from the continental U.S. should our deterrent strategy fail. Central to this strategy is our strategic mobility capability.

Strategic mobility is a triad comprised of airlift, sealift, and prepositioning of equipment and consumables in regions of the world where armed conflict is likely. This paper will examine one facet of this triad, airlift, though recognizing the elements of strategic mobility are interdependent in supporting our strategy of forward defense. Designed to inform Army unit movement coordinators, this paper will examine strategic airlift by evaluating the requirement for airlift support, determining airlift shortfalls, identifying user contributions to any shortfalls, and reviewing Army-unique programs designed to counter any requirement versus capability imbalances. *Keywords: military strategy;*

logistics; logistics planning; logistics management ←



Accession For	
NTIS CRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Availability for Special
A-1	

ABOUT THE AUTHOR

Major Ralph E. Griffith is a resident of San Antonio, Texas. He entered the Army in March 1969, serving in the Military Intelligence Corps both in CONUS and in the orient. He was commissioned an Infantry Officer upon completion of Officer Candidate School, Fort Benning, Georgia, in March 1973. Major Griffith was integrated into the Regular Army two years later. His first assignment as a Second Lieutenant took him to Fort Lewis, Washington, where he served as a Rifle Platoon Leader, Heavy Weapons Platoon Leader, Company Executive Officer, and brigade-level assistant staff officer with the 9th Infantry Division. In February 1978 he attended the Field Artillery Officer Advanced Course, Fort Sill, Oklahoma, graduating in September of the same year with a follow on assignment to the 25th Infantry Division, Schofield Barracks, Hawaii. There he served as a Rifle Company Commander, Battalion Operations Officer, and Battalion Executive Officer. It was during this tour he initially experienced intertheater mobility challenges. Major Griffith's next assignment took him home to San Antonio where he served as the Installation Intelligence and Security Officer at Fort Sam Houston following alternate specialty training at Fort Huachuca, Arizona. His latest assignment prior to attendance at the Air Command and Staff College was as Professor of Military Science, 4th Reserve Officers Training Corps Region with duty at Eastern Oregon State College. He is unmarried and is nearing completion of a post graduate degree in management.

EXECUTIVE SUMMARY



Part of our College mission is distribution of the students' problem solving products to DOD sponsors and other interested agencies to enhance insight into contemporary, defense related issues. While the College has accepted this product as meeting academic requirements for graduation, the views and opinions expressed or implied are solely those of the author and should not be construed as carrying official sanction.

"insights into tomorrow"

REPORT NUMBER

88-1110

AUTHOR(S)

MAJOR RALPH E. GRIFFITH, USA

TITLE

POWER PROJECTION THROUGH AIRLIFT; AN ARMY PERSPECTIVE

I. Purpose: To provide United States Army movement coordinators information relative to strategic airlift as a part of our strategic mobility capability. This paper will examine strategic airlift from an Army perspective by evaluating the requirement for airlift support, determining shortfalls, and reviewing Army programs to counter identified shortfalls.

II. Problem: The ability of the United States to deter aggression, limit conflict, or wage war successfully depends on our ability to rapidly deploy, employ, and sustain forces. Strategic airlift provides this capability. However, the United States does not possess sufficient airlift capabilities to meet current or projected requirements.

III. Conclusion: Airlift is a vital and highly effective instrument of national policy and a necessary component of our power projection capabilities. Airlift resources, however,

CONTINUED

are limited and will remain so for the foreseeable future. The effective use of this limited asset is not only the responsibility of the Military Airlift Command, but also the Army and other government agencies which use it. It is therefore recognized power projection depends not only on the capabilities and resources unique to each service, but also on close cooperation among the representatives of the respective services charged with mobility responsibilities.

TABLE OF CONTENTS

Preface	iii
About the Author	iv
Chapter One INTRODUCTION	1
Chapter Two THE AIRLIFT REQUIREMENT	3
Chapter Three SHORTFALLS	5
Chapter Four USER CONTRIBUTIONS TO SHORTFALLS	8
Chapter Five ARMY-SPECIFIC CORRECTIVE OPTIONS	12
Chapter Six SUMMARY	15
BIBLIOGRAPHY	16
APPENDIX A Air Deployment Task List	19

Chapter One

INTRODUCTION

The ability of the United States to deter aggression, limit conflict, or wage war successfully depends intensively on our ability to rapidly deploy, employ, and sustain general purpose forces. Potentially volatile situations exist throughout the world. The requirement for swift deployment of personnel and equipment cannot be overemphasized.

In his article, "Mr. President, We Can't Go", J.C. Bahnsen Jr., a retired Army Flag Officer, wrote,

"The military strategy of the United States is global and is based on forward deployment of forces in critical areas and rapid reinforcement in time of war to permit forward engagement. This global strategy demands the forward stationing of forces in peacetime, the forward positioning of equipment for CONUS based forces, and the capability to rapidly reinforce with troops, equipment, and supplies from CONUS should our deterrent strategy fail. Consequently, strategic mobility is fundamental to our national military strategy."

The purpose of this research paper is to examine strategic mobility from an Army point of view. While strategic mobility is a triad, comprised of airlift, sealift, and prepositioning of equipment and consumables in regions of the world where armed confrontation is likely, this paper will be concerned with the airlift element, though recognizing the elements of strategic mobility are inseparably interdependent in supporting the strategy of forward defence.

Only airlift can provide the rapid deployment of necessary defensive forces where we are unable to maintain adequate forces in place. Accordingly, this paper will examine strategic airlift, or intertheater airlift, from an Army perspective by evaluating the requirement for airlift support, determining resource shortfalls, identifying Army contributions to the shortfalls, and reviewing Army programs designed to counter those shortfalls. It is written specifically for Army Installation Transportation Offices and Unit Movement Coordinators, the service-unique transportation operating agencies responsible for unit movement readiness and efficiency as "the ability to deploy forces rapidly to deter an enemy is a national asset. Strategic airlift gives the US this capability. The effective use of this limited national asset is not only the responsibility of the Military Airlift

Command, but also the US Armed Forces and other government agencies that use it,"(11;iii)

Chapter Two

THE AIRLIFT REQUIREMENT

Deterring war across the conflict spectrum, assuring war outcomes which do not comprise our national interests, and improving, or at least maintaining, alliance cohesion are all goals dependent upon our ability to project forces. (2:35) Force projection is, however, still a very controversial doctrine within the public sector of the US. The fact remains the US has frequently used this ability when our national interests were at stake. Throughout, the US airlift capacity has played a key role in the effectiveness of our power projection. (10:11) It would be exceedingly costly, if not totally impractical, to maintain an adequate defensive force at each location where a potential enemy might attack. Since an enemy's advantage of surprise can be blunted by a quick and adequate response, strategic airlift is the only way to accomplish force projection the first few critical days of any conflict. A combat unit, no matter how well trained and equipped, cannot influence the outcome of a conflict unless its firepower is available to the battlefield commander. When timely delivery is necessary, there is no substitute for airlift. (6:4-1)

US military strategy requires the capability to deploy forces rapidly and then sustain them. As such, effective airlift is an extraordinarily useful component of our overall defense posture, particularly today with a clearly recognized need for a strong national defense as an essential factor in preserving peace. Under these conditions, airlift makes a particularly valuable contribution to the national defense for three basic reasons: (1:1)

(1) Effective airlift amplifies the deterrent effect of combat forces by allowing the same combat force to be effective against a variety of potential threats. By amplifying the mobility of general purpose forces, airlift enhances the deterrent effect of those combat units.

(2) Airlift is a highly visible element of national defense capability. The extent to which a national defense force in fact deters aggression depends, in significant measure, on how a potential adversary perceives our defense capability. If a potential enemy is aware the reaction time of our combat forces is such that launching an attack will not be worthwhile, they will not launch such attacks. Thus, the credibility of our deterrent capacity is greatly enhanced by airlift and effectively demonstrated through an effective program of airlift exercises in peacetime.

(3) The existence of airlift forces permits the United States to have a substantial part of its general purpose forces within the continental United States (CONUS). The ability to use combat forces deployed by air from the United States enables maximum expenditure of appropriate funds within CONUS, reduces expenditures of appropriate funds overseas, and correspondingly improves the balance of payments.

"Mobility forces are an indispensable component of our global response capability. They allow us to project power world wide -- even to austere regions -- and sustain that power over long periods. We must be able to move our combat and support forces rapidly with sufficient equipment and supplies to establish a solid military presence at distant locations where our interests are threatened. With that capability, we can make military action by opposing forces less likely and may decrease the force size needed for victory should deterrence fail." (6:6)

Our total strategic mobility capability is a triad -- sealift, airlift, and prepositioning of forces and equipment. It is a joint activity in the truest sense as sealift is a Navy mission, airlift an Air Force task, and prepositioning of forces principally an Army function. But aside from our forward deployed forces, the requirement for airlift lies in the fact the Army must rely on airlift to get to the fight. In this dynamic, fast-paced world, one of the most precious commodities is time. Time is distance - time is strategy - time is the ability to respond to an immediate crisis. The ability of the United States to deter aggression, limit conflict, or wage war successfully depends on the ability to deploy, employ, and sustain its fighting forces in a timely manner. The bottom line is the United States must always possess a credible airlift capability to move forces anywhere around the world in time to make a difference.

Chapter Three

SHORTFALLS

Among the world's major military powers the United States is unique as it is the only power which has extensive and binding military options beyond its own continent, while simultaneously faces no conventional military threat to its homeland which warrants retention of large military forces on its own territory. Sizeable forces are withheld on the continental United States, however, primarily as a rotation base for overseas military deployments and as a reserve for overseas military operations. Too, the United States is the central repository of the free world's strategic mobility capabilities and virtually the sole repository of its intercontinental airlift capabilities. No treaty ally manufactures military transport aircraft equivalent to the C-5B, C-141, or the KC-10. For the United States, a world power separated from its principle military obligations by thousands of miles, strategic airlift is not merely important, it is indispensable. (5:6) But do we possess sufficient airlift capabilities to meet requirements? An evaluation of airlift aircraft currently available, a general discussion of type cargoes required for airlift, and an examination of capability effectiveness should provide the answer to this ever important question.

The United States must be able to quickly deploy, employ, and supply its combat forces overseas to protect its worldwide security interests. This intertheater airlift is accomplished through employment of the following aircraft (5:32):

The KC-10 is a military version of the DC-10 commercial passenger transport. It is designed primarily for use by the Strategic Air Command for aerial refueling; however, approximately 45 of these aircraft have been specifically earmarked for mobility use. In its mission as a cargo transport, the KC-10A can carry a payload of up to 169,000 pounds or 27 military pallets. It is loaded and unloaded through a side cargo door, and operates with a normal cruise speed of 460 knots.

The C-141B is a four-engine, long-range, high-speed transport designed to carry personnel, vehicles, and cargo over intercontinental distances. It is an improved version of the C-141A, incorporating a 30 percent increase in fuselage length and other improvements. Approximately 235 are operated for worldwide strategic airlift missions. It can carry up to 150 troops, 123 paratroops, 13 463L pallets, or 94,000 pounds of cargo. It can deliver its payload either by airland or

aerial delivery and operates with a normal cruise speed of 440 knots.

The C-5A and C-5B are four-engine, long-range, high-speed transports designed to carry very heavy payloads of vehicles, personnel, and outsize cargo items too large for C-141 aircraft. Approximately 56 C-5A and 32 C-5B aircraft are currently in the inventory. They feature full-width fore and aft cargo openings, integral forward and aft loading ramps, and a kneeling landing gear to facilitate loading. A 28 wheel, high-floatation landing gear permits operation on many of the world's forward area airfields. Equipped for aerial refueling, it has a normal cruise speed of 440 knots.

Though not currently in the inventory, the C-17 will be an air-refuelable, four-engine, long-range, heavy-lift jet transport. It is being designed to operate both intertheater and intratheater. It will carry up to 144 troops, 18 463L pallets, or 172,000 pounds of cargo. Normal cruise speed will be 470 knots. Scheduled for initial operating capability in 1992, approximately 200 aircraft will be procured.

Just as the number of aircraft available impacts on strategic airlift capability, so do the categories of airliftable military cargoes. It is no less important to recognize airlift capability can be an expression of the three basic categories based on size. The first is bulk cargo, which refers to such items as fuel, ammunition, and other cargoes which are usually loaded on pallets and can be accommodated on almost any airlifter. The second is oversized cargo, such as medium sized trucks, jeeps and towed artillery which can be accommodated by the C-5, the C-141, and the KC-10 albeit more difficultly. The third category is outsize cargo, those items such as main battle tanks and large helicopters, too large to be accommodated by any airlifter other than the C-5 and, in the future, the C-17. The physical dimensions of most military cargoes are more important than their weights as most lack the density to impose a weight limitation on a given payload before imposing a spatial limitation. Thus, for most military cargoes, the floorspace of a given airlifter is more important than the gross weight of the payload the airlifter is capable of lifting. There are, however, exceptions to this general rule such as main battle tanks, self-propelled artillery, and other high-density items. (S:16)

Although outsize cargo comprises a significant portion of specified strategic airlift requirements, total airlift capability is an expression of effectiveness. Measured in several ways, the most common expression of airlift capability is in millions of ton miles per day (mtm/d), multiples of the capacity to move one ton of cargo by air a distance of one mile per day. Though this standard of measurement does not take into account such other constraints as exhaustion of aircraft and crews, weather, availability of airfields, and

overflight rights, it is a useful gauge of airlift requirements and capabilities, and has been accepted by the Congress of the United States and the Joint Chiefs of Staff as the product of the numbers of aircraft, daily aircraft utilization rates expressed in hours, the speed of the aircraft measured in nautical miles per hours, and the allowable cabin load (ACL) measured in short tons. (1:22-23)

In 1980, the Joint Chiefs of Staff specified strategic airlift requirements based on units with required delivery dates within the first 15 days of postulated major contingencies in the Persian Gulf, Iran, and NATO, to be 98 mtm/d, 102 mtm/d, and 150 mtm/d, respectively. (5:17) Recognizing airlift capabilities to fully meet those requirements were cost prohibitive, the Congressionally Mandated Mobility Study (CMMS) of 1981 established as a goal the capability to airlift 66 million ton miles per day, which remains the current Department of Defense goal. (5:18) And according to the Joint Chiefs of Staff in their Military Posture Fiscal Year 1988:

"The FY 88 funded airlift force will provide approximately 45.7 million ton-miles per day of intertheater cargo airlift capability. However, this is still well below the current Department of Defense goal of 66 mtm/d. This goal will be revalidated or revised as part of the Revised Intertheater Mobility Study (RIMS) now ongoing within the DOD."

In answer to the question, the United States does not possess sufficient airlift capabilities to meet requirements, Congressionally mandated or otherwise. However, dangerous this imbalance may appear, the United States must continue in its attempts to fulfill its extensive overseas military commitments, especially those in areas where we lack the advantages of military prepositioning ashore. To be sure, we must employ our finite resources to their fullest by effective and efficient efforts by both operator and users.

Chapter Four

USER CONTRIBUTIONS TO SHORTFALLS

As reflected earlier in this paper, the ability to deploy forces rapidly to deter an enemy is a national asset and strategic airlift provides the United States this capability. The Military Airlift Command (MAC) provides the airlift and controls the aircraft, assets which are limited and whose effectiveness is the responsibility of the MAC and the agencies which use it. Effective planning and execution of strategic airlift operations requires extensive efforts by both the operators and the users -- the Army, in this instance, (11;iii) Strategic mobility, then, becomes a matter of how fast a combat effective unit can be deployed to a war zone. Several factors limit the ability of a unit to move from point to point in the time required -- reaction time, force size, political considerations, availability of transportation modes, and the degree of movement planning accomplished by the using unit, (9;I-1) Strategic mobility success, therefore, is directly affected by unit readiness and the efficiency of transportation operating agencies. It is through this context that Army contributions to airlift shortfalls will be examined.

In May 1987, the General Accounting Office (GAO) completed an evaluation regarding the requirements for aerial port personnel to support wartime airlift operations. The GAO determined joint service regulations and MAC directives defined responsibilities for unit moves, with MAC responsible for technical supervision, materials handling equipment operation, providing loadmasters and ground control personnel to manage arrivals and departures of aircraft at the operating airfield. The report indicated "the moving service is primarily responsible for preparing, loading, and unloading its units," (8:12) Within the Army, transportation planning from unit level to Military Traffic Management Command (MTMC), from the CONUS base to the airport of debarkation, is a service responsibility. Unit Commanders and Unit Movement Officers are responsible for movement plan preparation and execution for mobilization, deployment, or contingency plans for which the unit has been troop listed. It is precisely through these efforts the Army can best contribute toward effective and efficient strategic mobility or, as we shall examine, detract from eliminating the strategic shortfall.

In a June 1987 report to the Deputy Chief of Staff for Logistics, Department of the Army (DA), the DA Inspector General identified six inaccuracies or inefficiencies in the Army mobilization movement planning process (7:2-3):

(1) Inaccurate/Incomplete Unit Movement Data (UMD) Worksheets. Applicable Army regulations require the submission of accurate and complete UMD worksheets. However, the DA inspection revealed the majority of units were not in compliance with this requirement. Of the worksheets which were completed, many were inaccurate as they failed to identify proper transportation modes, type of movement, and reflected incorrect vehicle dimensions and/or characteristics. Many forms were incomplete as the Unit Movement Officer (UMO) failed to list all personnel and equipment, failed to key waiver indicator codes or submission dates, and failed to complete type change key fields. It was rated the UMO was generally an untrained junior officer who had been assigned the position as an additional duty. This, combined with numerous competing priorities and the lack of emphasis on UMD submissions, resulted in unit personnel who were unfamiliar with the detailed planning requirements and, consequently, unable to comply with established procedures.

(2) Inadequate Movement Training. Army regulations stipulate the COMPASS (computerized movement and planning status system) and the Unit Movement Branch, Transportation and Services Division, DCS Logistics, US Army Forces Command, offer on-site training according to the staff's availability. This training is limited due to the lack of personnel within the unit movement branch. While some training is conducted on-site, not all units participate and those who do frequently send personnel other than the UMO. This ultimately results in the training of personnel not familiar with unit transportation requirements, further exacerbating reporting of accurate unit movement data. (7:3)

(3) Failure of the review process to provide proper quality control of unit input. A quality control check of UMD is required to be conducted at the unit and at each level of command where the data is keypunched. Procedures are required for receiving, validating, approving, and coordinating unit movement planning to ensure the unit data accurately represents movement requirements. (7:4) Three recurring problems were identified in this area. First, commercial transportation requirements did not reflect the actual requirements of the units. The inspection revealed no requirement for submission of the request for commercial transportation, and Installation Transportation Officer (ITO's) were required to capture requirements from associated forms, a practically impossible task considering the values of forms needed to be analyzed to project commercial requirements. Second, automated unit equipment list (AUEL) reports showed many vehicles as empty while loads had been programmed on the UMD worksheets for those same vehicles. As a result, the unit must resubmit the load data. Third, load planning on the AUEL did not reflect vehicles with reduced configuration, required for movement from the unit's base of

operation to the port of embarkation. Again, a confusing issue which detracts from efficient unit mobility.

(4) Antiquated Automated Data Processing (ADP) technology is the current COMPASS system. Deficiencies and limitations which impact on processing are (a) batch processing procedures and programs for updates and retrieval are inefficient and require excessive runtime, (b) the edit process can only review for alpha/numeric content and for the presence or absence of specific data in a given field, and (c) worksheets submitted for keypunching into UMD cards input are tedious and difficult to read. (7:6)

(5) Failure to verify outputs with the unit's submissions. Basically a reserve component shortfall, it is a sound management practice to verify input with output, however verification was not being accomplished due to lack of resources, low priority, and the absence of sanctions.

(6) Inadequate control over highway movements. Further exacerbating the mobilization movement planning process is the absence of a single point of contact tasked with coordinating mobilization movements. Again, primarily a reserve component shortfall, reservists have developed procedures to capture convoy movements of organic units but not other Army units or movement of other services. There is no adequate system in place to monitor the highway movements of units traversing the highways. (7:6)

These findings of the IG may appear inimical to strategic mobility, yet they are not attributable to all units or specific installation transportation offices. They are not necessarily a systemic problem but rather a unit execution problem, as two recent joint exercises revealed. On the adverse side, airlift associated with REFORGER 86 deployed 19,750 personnel and 1,188.2 short tons (Stons) of cargo in 126 missions, and redeployed 19,341 personnel and 1,084.5 Stons of cargo utilizing 116 missions. Problems associated with this exercise which contributed to transportation shortfalls included:

(1) Noncompliance with intertheater transportation planning weights on the part of user activities.

(2) Late receipt of deployment airflow data which prevented sound theater transportation planning causing irregularities in theater rail movements which, in turn, caused numerous operational delays.

(3) Airflow problems associated with arrival and departure airfield control group (AACG/DACG) operations (14:2).

Team Spirit 87, conversely, demonstrated effective interaction between MAC and resource uses. In 348 missions employing B-747, DC-10, KC-10, C-141, C-5, and C-130 aircraft, over 28,000 personnel and 5,500 tons of cargo were airlifted (13:4) and according to USCINCPAC, "MAC closure rates were excellent. The airlift goal was met due to the cooperation and participation of HQ USCINCPAC, COMUSKOREA, HQ MAC, 22AF, 834ALD, USPACOM components, component service airlift validators, and numerous departure, enroute, and destination activities." (13:4)

While the inefficiencies of Army transportation agencies have contributed directly to airlift shortfalls, they appear to be other than systemic problems and are, rather, a matter of unit execution. These deficiencies require corrective action, particularly within the automation and consolidated training areas, to achieve interoperability among all strategic transportation agencies.

Chapter Five

ARMY-SPECIFIC CORRECTIVE OPTIONS

The General Accounting Office and Department of the Army (DA) Inspector General reports have cited deficiencies in deployment operations at higher level planning and unit level execution. These findings and others are substantiated by after action reports of major exercises. This large planning to execution gap is injurious to rapid response to national emergencies and the execution of contingency plans. Across the board, with few exceptions, unit personnel are not capable of planning, organizing, and conducting movement training and operations. Current training strategies are not geared to the total force. Within the Army, these deficiencies can only be corrected through consolidated training and doctrine development and incorporation of finding--unique initiatives, automated initiatives, to eliminate many of the deficiencies and limitations presently found in the mobilization movement planning process. Two generalized areas involving Army--proposed initiatives will be examined in an effort to ensure units, equipment, and resupply meet the challenge of the global joint deployment commitment. (12;1-2)

In the automation area, previous audits, inspections, staff visits, and mobility exercises dating to 1977 have identified systemic transportation movement deficiencies which were similar to those rated in more recent evaluations. In view of the inherent problems of the current system, the highest Army leadership has recognized additional recommendations to increase command emphasis or establish more stringent procedural controls without major system revision would result in only minimum beneficial results. (7;9) As a result, new automation initiatives are scheduled to be fielded in 1988 to substantially improve the movement planning process, the Transportation Coordination Automated Command and Control Systems (TCACCIS) and the Crisis Action Management Systems (CAMS). Both a revision of COMPASS, TCACCIS and CAMS will utilize improved methods for acquiring and processing input and will provide user oriented output. Specifically, TCACCIS, which will be phased in incrementally from 1989-1990, will automate manual functions at the unit and installation level for unit movements during mobilization and deployment. Additional features include accommodation of organic and commercial rail and truck moves. Unit movement requirements will be transmitted to the MTMC automated system for prepositioning unit requirements (ASPUR) early in the execution phase of a deployment for automated processing of routing, rating, and booking functions. Both active and reserve component units will be capable of maintaining and

updating the unit equipment list which currently resides on COMPASS. (7:7) The CAMS is being developed to support the Joint Deployment Agency's rapid deployment initiative. (7:8) It is intended to automate transmission of unit movement requirements and adjustments to ASPUR as well as receive routing data, provide an automated capability to update COMPASS, and provide the capability to maintain unit equipment lists and transmit movement requirements upon execution without manual intervention. CAMS will provide the MTMC the capability to develop and modify data bases for use in OPLAN development, to expedite support for immediate crisis situations, and to transition into execution planning and actual execution. The CAMS/MTMC/ITO interface module will provide interim capability at the installation level until TCACCIS is operational and fielded.

Army initiatives designed to correct deficiencies through consolidated training and doctrine development center around the establishment of a Center for Strategic Deployment (CSD) at the US Army Transportation Center, Fort Eustis, Virginia. Provisionally activated 1 Oct 87, the specific mission assigned to the center is to develop and present formal and nonresident deployment training to selected officers and noncommissioned officers charged with planning and executing contingency OPLANS. Approved by USTRANSCOM, HQ MAC, TRADOC, and the Airlift Concepts and Requirements Agency, the center would house the expertise, automated systems, and hands-on training devices required to produce load planners, unit deployment planners, and strategic mobility planners expected to execute contingency OPLANS. Programs of instruction development and modification would be effected as a result of input from the USTRANSCOM, MAC, MSC, FORSCOM, and other appropriate agencies. Stressing jointness, the common objective of the center will be to enhance coordinated transportation operations among the services in deployment activities. (4:14)

The Air Deployment Division is primarily responsible for conducting the Air Deployment Planning Course, targeted at unit movement officers and noncommissioned officers and tailored to units with air deployment missions. Appendix A reflects the initial task list to be incorporated into the air deployment planning course. The Surface Deployment Division primarily administers the Surface Deployment Planning Course, designed for units with surface deployment missions, highway, rail, and sea, and aimed at unit movement personnel. The Strategic Deployment Division would be responsible for developing, updating, and providing instruction on Joint Deployment Systems use during deliberate and crisis action planning. Unlike the two preceding divisions, this functional element will train senior captains, select field grade officers, and senior noncommissioned officers. (4:15) The Operations Division encompasses research, doctrine, literature, and automation. It will actively participate in

JCS exercise programs to maintain deployment system cognizance and to review and evaluate policies and procedures to enhance coordinated transportation operations. It is precisely through efforts of the CSD that the Army will attempt to achieve a better mate with MAC and other strategic movers in such areas as marshalling procedures, loading procedures, deployment, employment, and redeployment.

Chapter Six

SUMMARY

Airlift has become a vital and highly effective instrument of United States national policy and a necessary component of our power projection capabilities, not only for our defense requirements but for our position of world leadership as well. However, airlift resources are limited and will remain so for the foreseeable future.

Of the three basic forms of strategic mobility -- prepositioning, sealift, and airlift -- the last is the most relevant to dealing with the more likely threats to U.S. security interests overseas. Although more expensive, only airlift can deliver forces quickly, deep inland, and in circumstances in which land and sea lines of communication are unavailable, inadequate, or denied. Unfortunately, however, the U.S. has never had the necessary strategic airlift to meet its requirements; the disparity between strategic lift capabilities and requirements is, today, especially pronounced. This disparity has not gone unnoticed. When fully implemented, the 1983 Airlift Master Plan will significantly increase lift capabilities, although it will not achieve the CMMS target of 66 mtm/d until the 21st century. The Army, too, has focused directly on improving its ability to deploy through the Center of Strategic Deployment which will house the expertise, automated systems, and hands-on training devices required to produce load planners, unit deployment planners, and strategic mobility planners.

Although the treatment given the subject of this paper has been rather generalized and service specific, it is certainly recognized that power projection depends not only on the capabilities and resources unique to each service, but also on close cooperation among the representatives of the respective services charged with mobility responsibilities.

According to "Doc" Bannsen, quoted initially in this paper, "Solutions seem to be at hand to meet our neglected strategic mobility requirements for the first time since World War II if we are all ready to make hard decisions. An extraordinary opportunity exists now to make strategic mobility a reality if inter- and intra-service rivalry can be subjugated to the greater good of the Nation." (3:116)

BIBLIOGRAPHY

A. REFERENCES CITED

Books

1. House of Representatives, United States Congress. The Posture of Military Airlift. Washington D.C., U.S. Government Printing Office; 1975 and 1976.
2. Weinberger, Caspar W. Annual Report to the Congress. Washington D.C., U.S. Government Printing Office; 1987.

Articles and Periodicals

3. Bahnsen, John C. "Mr. President, We Can't Go!" Armed Forces Journal International, October 1987, pp. 113-114.
4. Barnett, Vaughn D. "Center For Strategic Development -- the Need," Transportation Journal, October 1987, pp. 14-15.
5. Institute for Foreign Policy Analysis, Inc. "U.S. Strategic Airlift: Requirements and Capabilities." National Security Papers, January 1986, p. 16.
6. U.S. Government. "Force Projection." Air Force Issues Book, Spring 1987, p. 4-1.

Official Documents

7. Department of the Army. Total Army Mobilization. Inspector General Report to DCSOPS, Washington D.C., June 1987.
8. General Accounting Office. Wartime Airlift Operations. Report to the Secretary of Defense and Armed Services Committees, Washington D.C., May 1987.
9. U.S. Army Forces Command Regulation 55-1. Transportation and Travel, Unit Movement Planning. Fort McPherson, GA, December 1985.

CONTINUED

Unpublished Materials

10. Cooper, W.E., MAJ, USAF, "Strategic Airlift: Current Capabilities and Future Trends," Research study prepared at the Air Command and Staff College, Air University, Maxwell AFB, AL, 1979.
11. Todd, David F., MAJ, USAF, "Power Projection thru Airlift -- How To Make It Work," Research study prepared at the Air Command and Staff College, Air University, Maxwell AFB, AL, 1987.
12. Letter, CG, U.S. Army Transportation Center, "Proponency for Strategic Deployment," Fort Eustis, VA, December 1987.
13. Message, USCINCPAC, "Team Spirit 87 Impressions Report," Camp Smith, HI, June 1987.
14. After Action Report, AEUTR-MCA-UMCC, "Reforger 86," undated.

B. RELATED SOURCES

Articles and Periodicals

- Congressional Budget Office, "Improving Strategic Mobility: The C-17 Program and Alternatives," Washington D.C., September 1986.
- Congressional Budget Office, "U.S. Airlift Forces: Enhancement Alternatives for NATO and Non-NATO Contingencies," Washington D.C., April 1979.
- Defense Logistics Agency, "Soviet Force Projection -- can We Meet the Challenge," Alexandria, VA, June 1986.
- Institute for Foreign Policy Analysis, Inc, "U.S. Strategic Airlift Choices," National Security Papers, 1986.
- U.S. Air Force, Military Airlift Command, "The Case for the C-17," Scott AFB, IL, 1986.

CONTINUED

U.S. General Accounting Office. "Emergency Airlift:
Responsiveness of the CRAF Can Be Improved."
Washington D.C., March 1986.

Unpublished Materials

Lentine, Joseph W., LTC, USAF. "Airlift -- An Instrument of
National Policy." Thesis of the Air War College,
Air University, Maxwell AFB, AL, April 1965.

Stackhouse, William K., MAJ, USAF. "Strategic and Tactical
Airlift Interfaces and the Nixon Doctrine." Research
report submitted to the Air Command and Staff College,
Air University, Maxwell AFB, AL, May 1972.

APPENDICES

TASK TITLE *****	
Write a unit air load plan.	Compute hazardous cargo compatibility, air.
Write a unit air load plan.	Determine hazardous material packaging requirements during deployment.
Ensure the POR is conducted.	Determine hazardous material packaging requirements during peacetime.
Coordinate unit POR.	Supervise the packaging of hazardous material, air.
Coordinate military and commercial carriers for cargo and passengers movement with ITO.	Prepare DD Form 1387-2, Special Handling Data/Certification.
Plan air load equipment/cargo tie-down requirements.	Prepare FORSCOM Form 285-R, Vehicle Load Card.
Coordinate the acquiring of materiel handling equipment.	Prepare DD Form 2133, Joint Airlift Inspection Record.
Coordinate the acquiring of tie-down materials.	Prepare DD Form 2327, Unit Aircraft Utilization Plan.
Coordinate the acquiring of shoring materials.	Prepare DD Form 2327C, Unit Aircraft Utilization Plan, Continuation.
Recommend aircraft type needed to move unit.	Prepare DD Form 2130-2, C-130 Cargo Manifest.
Ensure company air load plans are viable.	Prepare DD Form 2131, Passenger Manifest.
Coordinate movement of shipments from mobilization station to APOE.	Prepare DD Form 2328, Aircraft Utilization Summary.
Recommend quantity of aircraft needed to move the unit.	Prepare DD Form 2130-3, C-141B Cargo Manifest.
	Prepare DD Form 2130-1, C-5 Cargo Manifest.

APPENDICES

Supervise unit compliance with special hauling permits for oversize vehicles to APOE.

Prepare Deployment Readiness Reports.

Prepare unit level transportation deployment portion of Logistics Annex to operations order.

Coordinate use of logistical assets with supporting units to transport troops, equipment, and cargo.
(BC 88 03 # 1)

Coordinate air movement request processing with the ITO.

Plan aircraft loading with DACG.

Coordinate aircraft loading with DACG.

Reduce vehicle dimensions.

Ensure vehicles are properly marked for air shipment.

Determine loaded pallet weight being loaded on aircraft.

Determine loaded pallet size being loaded on aircraft.

Supervise pallet marking.

Ensure vehicle cargo is properly secured.

Supervise sling loading equipment and cargo rigging for a CH-47 aircraft.

Calculate the vehicle's center of balance.

Ensure vehicle is loaded as per unit load plan.

Coordinate training of equipment operators to meet transport requirements.

Ensure safe sling load operation in and around CH-47 aircraft.

Train unit on air movement tie-down procedures.

Train unit to be proficient in execution of air load operation.

Train unit to be technically proficient in air load.

Supervise hazardous cargo movements IAW applicable rules and regulations.
(BC 88 03 # 15)

Plan safety procedures when dealing with hazardous cargo, air.

Ensure safety procedures are followed when dealing with hazardous cargo, air.

Advise company commander on requirements of hazardous material regulations for aircraft transport.

Ensure hazardous cargo documents are correct and complete.

Coordinate for certification of hazardous cargo certification.

APPENDICES

Ensure vehicle safety and maintenance inspections are correctly conducted prior to loading.

Ensure materiel handling equipment is safely and properly used. (BC 88 03 # 16)

Ensure safety during an air movement operation.

Plan safety requirements for air deployment.

Plan operations at DACG/AACG location.

Ensure security at DACG/AACG location.

Coordinate for reception point at AACG/DACG location.

Control reception point at AACG/DACG location.

Assign jobs at AACG/DACG location.

Coordinate availability of logistical support at AACG/DACG location.

Ensure logistical support is available at AACG/DACG location.

Operate an Arrival/Departure Airfield Control Group (A/DACG). (BC 88 03 #839)

Write a unit air movement SOP.

Interpet Automated Air Load Planning System (AALPS) printouts.

Train unit on how to build up a 463L pallet.

Supervise the execution of a 463L pallet build up.

Ensure DACG/AACG personnel are trained to conduct ground guide procedures on and off aircraft.

Plan a unit security plan.

Ensure unit security plan is followed.