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**The Role of External Support
in Total Force Planning**

John C. F. Tillson

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INSTITUTE FOR DEFENSE ANALYSES

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PREFACE

The task documented in this report was performed by the Institute for Defense Analyses for the Office of the Director (Program Analysis and Evaluation) in fulfillment of the task entitled "Wartime Host Nation Support." The report discusses the potential role of External Support in Total Force Planning efforts conducted by the Department of Defense. The term "External Support" is meant to apply to all forms of support provided to U.S. military forces by external sources. The primary sources of External Support are Host Nation Support and contractors. Planning for the use of expanded amounts of External Support holds open the possibility of making significant savings in support forces for all the Military Departments.

The author is particularly grateful to Mr. John Brinkerhoff, who wrote a detailed history of the efforts to obtain External Support in the Gulf War. This history benefited from the contribution of COL Charles D. Bartlett, U.S. Army (ret.), who commanded the ARCENT Contracting Command during the war.

This paper was reviewed by Mr. Michael Leonard, Mr. Martin Lidy, and ADM Sam Packer, U.S. Navy (ret.).

CONTENTS

Preface	iii
Summary	S-1
A. Introduction	1
B. Types of External Support.....	3
1. Wartime Host Nation Support (WHNS).....	3
2. Contractor Support.....	4
3. Other Forms of External Support	7
C. Policies Addressing External Support.....	7
D. External Support in the Gulf War	9
1. Prewar Plans for External Support	9
2. Wartime Use of External Support	11
E. Current Status of External Support Planning	14
1. Planning for War in Southwest Asia	14
2. Planning for War in Northeast Asia.....	15
3. Constraints on Effective ES planning.....	18
F. Potential Levels of External Support	23
1. Potential for Southwest Asia	23
2. Potential for Northeast Asia.....	25
3. Potential Levels of External Support in Both Theaters	29
4. Potential Impact of CSS Reductions on Army Budget and Strategic Lift Requirements	30
G. The Need for True Total Force Planning	32
H. Potential Next Steps	35

APPENDIXES

A. Authorities Supporting the Use of Forms of External Support.....	A-1
B. Potential Levels of External Support	B-1
C. References	C-1
D. Glossary.....	D-1

TABLES

1. Types of Service Available under LOGCAP Umbrella Contract	5
2. List of Authorities Governing the Use of External Support.....	8
3. Relative Dependence on External Support by Function	12
4. Support Units and External Support Equivalents in Southwest Asia.....	13
5. Korean External Support Converted to Equivalent U.S. Forces	16
6. ES Equivalent Units for CENTCOM/Army Planning	23
7. Additional Functions and Populations Susceptible to Conversion to External Support in Southwest Asia.....	24
8. Additional Functions and Populations Susceptible to Conversion to External Support in Northeast Asia.....	29
9. Short Tons Per Soldier	31

SUMMARY

U.S. military forces at war have always relied on External Support (ES), i.e., support from U.S. civilians and from military personnel and civilians from other nations. This support may be provided in the United States, in the combat theater, or in the air and sea lanes between the two. During the Cold War the United States relied extensively on External Support from its NATO allies and was able thereby to promise to have 10 Army divisions in Europe in 10 days. During Operation Desert Shield, External Support was critical to the rapid deployment of combat forces and to their sustainment in the desert. External Support was also critical in helping to move U.S. combat forces into position for the offensive phase of Operation Desert Storm and for the sustainment of the attack into Kuwait and Iraq.

External Support remains essential to the implementation of the U.S. National Security Strategy. For example, the delivery of U.S. ground forces on the schedule envisioned in the U.S. National Security Strategy is dependent on External Support. This analysis suggests that it is possible to expand the use of External Support significantly. Such an expansion could allow for more rapid delivery of Army forces to a combat theater and more efficient support of those forces in the theater. The analysis also suggests that External Support could produce a less expensive but high confidence alternative to many of the Combat Service Support forces that are currently thought to be a necessary part of U.S. National Security Strategy. The expansion of External Support could also reduce the need for strategic air and sea lift.

The principal forms of External Support in use today are as follows:

1. Wartime Host Nation Support (WHNS) in which a host nation agrees to provide support to deployed or deploying U.S. forces. WHNS can take many forms. It may involve host nation military forces or civilian contractors. It may involve provision of services or material. Payment for WHNS may come entirely from the host nation or may come in part or entirely from the United States.
2. Contingency contracting in which a U.S. contracting officer signs a contract directly with a host nation or third country civilian contractor for services or material to be provided in a crisis or war. Contingency contracts may be made as part of a war plan in anticipation of a crisis or war or may be entered

into in the course of a crisis or war. Contingency contracts may provide more reliable service or supplies because payment for contingency contracts comes directly from the United States.

3. Extension of peacetime contracts into crisis or war. U.S. forces rely on contractors to provide a wide range of support in peacetime. In many cases these peacetime contracts have wartime clauses that call on the contractor to provide current or expanded levels of support in a crisis or war. Support provided via one of these contracts may be the most reliable form of ES because a peacetime relationship exists between the supported element, e.g., the Army, and the contractor.
4. Each of the Military Departments has contingency contracts with U.S. contractors to provide support in a crisis or war. In these cases the U.S. contractors typically provide management and skilled support while entering into subcontracts with local contractors to provide the bulk of the support needed. The Army Logistics Civil Augmentation Program (LOGCAP) contract is the best known of these contracts. The Navy contract is known as the Navy Emergency Construction Capabilities Contract (CONCAP). The Air Force equivalent is the Air Force Contract Augmentation Program (AFCAP).
5. U.S. commercial aircraft and ships provided voluntarily by U.S. firms in exchange for peacetime considerations, as part of the CRAF and VISA program.
6. U.S. civilian employees of the DoD or of defense contractors.

The major focus of this study has been on the Army and on the potential for External Support to either reduce the current shortfall in Army combat service support (CSS) forces or to reduce the overall requirement for CSS forces. This study is based on two different analytic efforts. As a first step we investigated the Army's use of External Support in the Gulf War and estimated the units that would have been required had that support not been available. In the second step, we analyzed the troop list the Army developed for its Total Army Analysis for the year 2003 (TAA03) and made estimates of the levels of External Support that might be achieved in Southwest Asia and Northeast Asia given a vigorous effort at obtaining WHNS agreements and contingency contracts.

We applied the following decision rules in making our estimates of the potential levels of External Support in these two theaters:

1. Was this function performed by ES in the Gulf War?
2. Is this function currently performed in support of U.S. forces in peacetime?

3. Is this function scheduled to be performed by WHNS or other forms of ES in support of U.S. contingency plans?
4. Is this function included in the LOGCAP statement of work?
5. Is this a command and control function and therefore not susceptible for conversion to ES?

EXTERNAL SUPPORT IN SOUTHWEST ASIA

External Support was critical to U.S. success in the Gulf War. In the first months of Operation Desert Shield, External Support provided essentially the entire Army supply and service effort. Host Nation Support provided bulk fuel and fresh food. The rest of the External Support was provided by contractors under contract to the U.S. Army. There were no prior plans for obtaining contractor support. The vast majority of the External Support obtained by the Army in the Gulf War was obtained in an ad hoc manner. The Army had no doctrine for contingency contracting. No market surveys had been conducted. There was no Army contracting organization nor were contracting personnel high on the deployment priority list. Despite this lack of planning and the resultant confusion and disorganization that hindered the contracting effort, we estimate that the amount of ES actually obtained in 1990 and 1991 was the equivalent of about 72,000 U.S. Army soldiers.

Assuming that, with prior planning, the Army would be able to obtain at least the same amount of ES in a future war in Southwest Asia that it obtained in the Gulf War, the Army should be able to obtain ES that amounts to 93,000 soldiers. About 72,000 equivalent soldiers would be in cargo truck companies, engineer construction battalions, petroleum supply and transportation companies, maintenance units, railway battalions, terminal and cargo handling battalions, and water supply units. An additional 21,000 equivalent soldiers would be needed to support the basic 72,000 equivalent soldiers.

In addition to this potential level of External Support which replicates what was obtained in the Gulf War, the application of our decision rules suggested a possibility for obtaining additional ES in a number of other areas such as military police, materiel management, medical logistics, and supply. These functions are performed by about 18,000 soldiers on the TAA03 troop list. Combining these two approaches suggests that a vigorous ES program might obtain levels of ES that approach 100,000 equivalent soldiers. This is about 25 percent of the forces on the Army's TAA03 troop list. This number of CSS soldiers and the weight of their equipment is equivalent to the manpower and equipment weight of about five heavy divisions and would require over

20 Large Medium Speed Ro Ro (LMSR) sorties to deliver these units to the theater. If these Army forces were removed from the force, the annual savings in pay and operating and support costs would be about \$1 billion if they were Reserve component forces and about \$4.5 billion if they were Active component forces.

EXTERNAL SUPPORT IN NORTHEAST ASIA

Application of our decision rules to the TAA03 troop list suggests the possibility of obtaining External Support in Northeast Asia (Korea and Japan) at a level over 120,000 equivalent soldiers. This number amounts to almost 40 percent of the total number of forces on the Army's TAA03 list. This number of CSS soldiers and the weight of their equipment is equivalent to the manpower and equipment weight of about five heavy divisions and would require over 20 LMSR sorties to deliver these units to the theater. If these forces were removed from the force, the annual savings in pay and operating and support costs would be over \$1.2 billion if they were Reserve component forces and over \$5 billion if they were Active component forces. Given the size of the Korean and Japanese populations and the dynamic nature of their economies, levels of ES approaching this magnitude appear to be possible.

TOTAL FORCE PLANNING

The DoD definition of the Total Force includes DoD civilians, U.S. and foreign contractors, and Host Nation Support as well as the Active and Reserve component forces of the Military Services. Given this definition, Total Force planning to meet the needs of the National Security Strategy should include all portions of the Total Force. Our analysis suggests that anywhere from 25 to 35 percent of the deployable Army forces considered necessary to meet the needs of the U.S. National Security Strategy could be provided by some form of External Support. Achieving levels of ES of this magnitude would represent a significant change in the Army's plans for a war in both Northeast Asia and Southwest Asia and would certainly represent a major change in Army support concepts. Increasing the amount of ES available early in a crisis could allow Army combat forces to reach the theater more quickly because ES assets would be able to support Army combat forces from the beginning of the contingency and because using ES would reduce the required flow of Army support forces. Expanded use of ES could also reduce the demand for strategic lift forces both early in the deployment and overall.

Current CINC and Army plans account for only small amounts of External Support. It appears that a vigorous program to obtain External Support has the potential

to save significant resources that could be applied to meet other Army needs. Any savings must be considered in the context of an Army need to be able to deploy to contingencies around the world for which detailed planning has not been conducted. Before major changes are made in Army support force structure, care must be taken to ensure that the Total Force support capability (including such forms of External Support as LOGCAP) is adequate to meet other potential demands.

While this study has focused primarily on the Army, there are indications that similar changes might be made in ways the other Services plan on using External Support.

THE ROLE OF EXTERNAL SUPPORT IN TOTAL FORCE PLANNING

A. INTRODUCTION

IDA has been tasked to investigate the status of planning for the use of Wartime Host Nation Support (WHNS) in the two Major Theater Wars (MTWs) for which the Department of Defense (DoD) plans as part of the National Military Strategy. As part of this study IDA was to identify the levels of support currently planned and the levels of support that appear possible. During this study we discovered that there were other kinds of support in addition to WHNS that should be considered when planning for an MTW. Accordingly, we have structured this study around a new concept that we have called External Support (ES).

U.S. military forces at war have always relied on ES, i.e., support from U.S. civilians and from military personnel and civilians from other nations. This support may be provided in the United States, in the combat theater, or in the air and sea lanes between the two. External Support of one kind or another is essential to the implementation of U.S. National Security Strategy today. If U.S. forces are to engage in a timely fashion in a MTW in Korea or Southwest Asia, they can succeed in the manner currently anticipated only if they receive massive and rapid support from external sources.

DoD has policies calling for the use of External Support in NATO but has no explicit policy addressing the two scenario conflicts currently used as the basis for force planning. The Army, the Air Force, U.S. Pacific Command, U.S. Forces Korea, and U.S. Central Command also have policies addressing the use of External Support, but these are not comprehensive and are, to some degree, conflicting. Yet, the cost is high to maintain military units to perform missions that can be performed by External Support. Moreover, the resources required to maintain these forces might be more effectively devoted to other DoD needs. The purpose of this paper, therefore, is threefold: (1) to describe External Support and the extent of U.S. reliance on it, (2) to investigate the potential for U.S. forces to make better, and perhaps increased, use of External Support, and (3) to draw conclusions about the potential for External Support to be included in a more effective Total Force Planning process.

The External Support that should be of interest to U.S. force planners should include all forms of support provided to U.S. forces in a war from sources that are external to the U.S. military itself. This includes all materiel, all services, and all forms of manpower and equipment provided to U.S. forces by external sources regardless of the form in which the support is provided and regardless of who pays for the support. For example, in planning for war in Korea, the Republic of Korea currently plans to provide a wide range of support for U.S. forces:

1. *Services* of all kinds, including reception and unloading of ships and aircraft; transportation of personnel, equipment and supplies; preparation of food; engineer and firefighter support; maintenance of U.S. equipment and facilities; security of U.S. personnel and facilities; provision of water and electric power.

2. *Facilities* to support the arrival and deployment of U.S. ground, air, and naval forces; hospitals for the care of sick and wounded; enemy prisoner of war camps.

3. *Materiel* of all kinds, from food (Class I) through spare parts (Class IX).

This support will be provided in a variety of ways:

- ROK military units
- KATUSA personnel - Korean soldiers augmenting U.S. Army units
- Korean Service Corps - unarmed Korean civilians organized into units to provide a range of engineer and related support activities
- Korean civilians hired by U.S. military forces
- Civilian assets mobilized under ROK or U.S. military command and control
- Civilian firms under contract to the ROK government or to the U.S. military
- Local, U.S., or third-country civilian firms under the Army Logistics Civil Augmentation Program (LOGCAP) or similar arrangements
- Purchase from the local economy

This support will be provided in accordance with prewar government-to-government agreements or contingency contracts with civilian providers, or, in the absence of prewar agreements, in accordance with agreements and contracts entered into during the war. This support will be paid for in the short term by the U.S. and Korean governments according to existing agreements or agreements that will be entered into in the course of the war. Ultimately, as in the Gulf War, payment may come in part from the international community.

Increasing the amount of ES available early in a crisis could allow Army combat forces to reach the theater more quickly because ES assets would be able to support Army combat forces from the beginning of the contingency and because using ES would reduce the required flow of Army support forces. Expanded use of ES could also reduce the demand for strategic lift forces both early in the deployment and overall.

The rest of this report describes the two principal forms of ES, existing policies regarding ES, the ES the United States received in the Gulf War, and the ES that is currently planned for the two MTWs. The report then discusses the ES that might actually be obtained in future wars and describes the potential importance of ES as part of Total Force and Total Logistics planning.

B. TYPES OF EXTERNAL SUPPORT

1. Wartime Host Nation Support (WHNS)

WHNS is the form of ES that receives the greatest amount of attention from planners in the CINC and Service Component staffs. The DoD defines Host Nation Support as—

Civil and/or military assistance rendered by a nation to foreign forces within its territory during peacetime, times of crisis/emergencies, or war based upon agreements mutually concluded between nations.¹

This definition covers only that support provided by the nation in which the forces are operating and for which there are formal government-to-government agreements. WHNS obtained from our NATO allies would have provided the largest amount of ES to U.S. forces in a war in Europe. This definition is too narrow to account for most of the support provided U.S. forces during the Persian Gulf War, however, and is also inadequate for much of the support the United States expects will be provided in a future MTW. The definition also fails to address the question of who pays for the support provided. The discussion of WHNS planning in Korea below will explain the importance of the "Who Pays?" to the overall effort to obtain WHNS agreements in Korea.

¹ "Department of Defense Dictionary of Military and Associated Terms," Joint Pub 1-02, 1 December 1989.

2. Contractor Support

Contractors provided the bulk of ES the Army used during the Gulf War. All of this support was obtained following the initial deployment of Army personnel to Saudi Arabia. None was planned in advance. In future wars contractors may, once again, be employed in large numbers to support Army forces. Contracts for support in a contingency are called "contingency contracts." Contingency contracts require the U.S. Government to pay directly for the services rendered by the contractor. They may be entered into in advance of a contingency or following the start of a contingency as they were in the Gulf War. The ability of contractors to meet Army needs is enhanced by advance planning. The Army can provide for ES by entering into contracts with civilian firms from the host nation, from the United States, or from third countries in peacetime for support in wartime.

This is exactly what all the Services have done by entering into contingency contracts with U.S. contractors designed to provide ES in an MTW or other contingency. The Army currently has two such contracts in force as part of the Army's Logistics Civil Augmentation Program (LOGCAP).² The best known of these contracts is the Army contract with the Brown and Root Corporation that is currently being used to provide ES to U.S. forces in Bosnia and was used to provide ES to Army forces in Somalia and Haiti. The Army has recently entered into another LOGCAP contract with Dyne Corp. This contract can be used to provide ES in a future contingency or war.

The Navy equivalent to the Army LOGCAP contract with Dyne Corp is called the Navy Emergency Construction Capabilities Contract (CONCAP). CONCAP is designed to provide a full range of services, including communications, construction, electric power, POL handling, and medical. The Air Force equivalent is the Air Force Contract Augmentation Program (AFCAP), which provides a similar range of services.

According to the newly signed Army contract, the LOGCAP contractor is required to be able to perform the full range of services outlined in Table 1. In performing these services the contractor is required to furnish the necessary equipment, ancillary supplies, personnel, administration, and management. Equipment to be provided might include buses, trucks, vans, wreckers, forklifts, generators, rough terrain container handlers, and sanitation trucks. Personnel would include supervisors as well as skilled and unskilled workers. In general, the managers and many of the skilled workers will be

² LOGCAP is defined under Army Regulation (AR) 700-137.

U.S. citizens, many with extensive military experience, and the less skilled workers will be local citizens or third country nationals. The LOGCAP operation in Bosnia and surrounding countries involves about 1,500 Americans and 6,000 local workers, for example.

Table 1. Types of Service Available under LOGCAP Umbrella Contract

Type of Service	Examples
Electric power	Generation and distribution
Engineering/construction	Bed down and facilities construction/renovation and repair, site preparation, facilities engineering, road/bridge/rail/runway/port/pipeline/walkway construction and/or repair, temporary real property leasing, utilities repair/upgrade
Equipment maintenance	Unit through general support level maintenance for table of distribution and allowances (TDA) equipment including automated data processing equipment, tactical modified table of organization and equipment (MTOE), and commercial equipment
Field services	Billeting and food service, clothing exchange and bath, laundry and clothing repair, facilities management, sanitation including hazardous waste, administration, post office and banking, morale, welfare, and recreation
Guard services	24-hour program (for peacetime, non-hostile situations) for physical security, access control, and law enforcement for assigned camps and outposts as well as training for security personnel at U.S.-controlled locations.
Medical services	Supply, maintenance, transportation, administration, and vector control services
Mortuary services	Establishing theater mortuary evacuation point and receiving, processing, and arranging transportation for U.S. military and other remains.
Retrograde	Supply, maintenance, and transportation (to worldwide disposition locations) of personnel, supplies, casualties, scrap, hazardous materials, and equipment
Signal	Telephone cable repair, cable/wire/antenna installation, access to communications networks
Supply operations	Services necessary to requisition, receive, store, account, issue, and manage Class I through Class IX supplies, from unit to general support levels
Transportation	Movement control, cargo transfer, motor pool, port/ocean terminal operations, line and local haul, arrival/departure air control group

In recognition of the potential for LOGCAP to provide a range of combat support services to U.S. forces in Korea, in April 1997, the chief U.S. logistician in Korea identified the following areas where LOGCAP could support U.S. Army forces in Korea:³

- Reception, staging, onward movement, and integration (RSOI) operations from the ports to the tactical assembly areas - plan and conduct all aspects of air and sea port operations
- Engineer support and engineer materials
- Mortuary affairs capability throughout the entire communications zone

³ Memorandum for the Commander, Army Materiel Command, from BG Barry D. Bates, Assistant Chief of Staff, G-4, Eighth U.S. Army, Korea, 19 April 1997, Subject LOGCAP Worldwide Requirements.

- Provision of containers and container handling equipment, forklifts, cranes, heavy equipment transporters, railcars, barges, landing craft, tugs, lighters, fire boats, aircraft lift loaders, etc.

The Army can also enter into contingency contracts with host nation or third country contractors without the intermediary U.S. contractor provided by the LOGCAP process. In Northeast Asia or Southwest Asia, for example, the Army could enter into contingency contracts with large and small contractors for support in a war - just as they do today for peacetime support. Contingency contracts with host nation contractors must be approved by the host nation government to ensure that the host nation does not have other wartime plans for those assets.

Contingency contracts are useful because they represent a signed agreement with a specific supplier for a specific service. Such contracts provide U.S. commanders more control than they generally obtain from WHNS. Contingency contracts prepared in advance have additional advantages: they allow U.S. CINCs to make specific plans in advance, and they allow U.S. forces to exercise those plans as necessary. If contingency contracts are to take the place of U.S. units, they probably should be prepared in advance of a contingency unless the service or supplies in question are so commonly available that advance contracting is unnecessary.

In NATO, planners signed contingency contracts with large firms such as Mercedes and Volkswagen for a wide range of supplies and services. These contracts allowed the United States to reduce the number of CSS personnel it planned to send to a war in Europe and to reduce the number of spare parts and other materiel needed to support U.S. forces.

The Civil Reserve Air Fleet (CRAF) is essentially a contingency contract in which the U.S. government has agreed with U.S. carriers to provide peacetime work in exchange for the carriers' agreement to modify some aircraft to carry military cargo and to provide these and other aircraft to carry U.S. forces in a contingency. In other words, the CRAF program is a form of External Support that allows the United States to reduce the number of airlift units that would otherwise be required to meet wartime needs.

Peacetime contracts that have wartime clauses providing for continuing support or for increased levels of support have the potential to become the most important form of ES. Because they allow commanders to become familiar with the capabilities and reliability of the contractor during peacetime operations, such contracts may provide commanders the best assurance of wartime performance.

Contracting officers in CENTCOM and USFK are aware of the potential for contingency contracting and for peacetime contracts with war clauses to meet many of the needs for support activities. Planners and contracting officers in all three commands indicated that the importance of both types of contracts is well understood. Despite their potential, contingency contracts are not in evidence in either theater. There are no peacetime contracts with war clauses in SWA and only one contract in Korea that has received approval from the host government.

Contingency contracting and peacetime contracts with war clauses appear to hold the greatest potential for providing ES of the magnitude and reliability necessary to meet the needs of the CINCs. If the Army is to obtain the benefits of ES provided by contractors, Army planners need to take a number of specific actions such as those outlined in section H, below.

3. Other Forms of External Support

Other forms of ES that are crucial to the success of U.S. operations include the use of host nation facilities such as air and sea ports, highways, railroads, and pipelines. The provision of materiel of all kinds should also be considered ES. While the third countries will not likely be able to contribute major items of combat equipment, they can provide CSS equipment ranging from rental cars and buses to heavy engineer equipment, transport aircraft, and trains. They can also provide important supplies such as food, barrier materiel, medical supplies, and spare parts for commercial vehicles.

C. POLICIES ADDRESSING EXTERNAL SUPPORT

DoD has no direct guidance for providing support to U.S. combat forces in the two MTWs used for Defense planning. There are, however, a number of authorities that address these issues either directly or indirectly. Table 2 summarizes the existing direct (D) and indirect (I) guidance that appears to be applicable to the use of some form of External Support in force planning. A detailed description of these documents is provided in Appendix A.

Table 2. List of Authorities Governing the Use of External Support

Authority	Direct (D) or Indirect (I) Guidance				
	Ext. Supt.	WHNS	Contingency Contracting	LOGCAP etc.*	Other**
DoDD 2010.8 NATO Logistics		D	D		D
DoDD 1100.04 Guidance for Manpower Programs	I				
DoDD 1100.18, Wartime Manpower Mobilization Planning	I				
DoDI 3020.37, Continuation of Essential DoD Contractor Services During Crises			I	D	
Army Regulation 570-9, Host Nation Support		D			
Army Regulation 700-137, LOGCAP			D	D	
Air Force Handbooks on Contingency Contracting			D		
USFK Regulation 550-52, WHNS		D			
CINCPAC Instruction 4230.1c Contingency Contracting			D		
CENTCOM Regulation, 700-2, "Outsourcing Logistical Support: Host Nation Support, Other Nation Support, Contracting and Civil Augmentation Programs	I	D	D	D	

* LOGCAP is a Logistics Civil Augmentation Program. The Navy and Air Force have similar programs.

** Includes such programs as transportation and petroleum pipeline sharing.

Overall, we found that there is specific guidance for NATO that directly includes aspects of ES, and there is DoD-wide guidance for manpower that indirectly includes aspects of ES. In general, the DoD guidance documents clearly direct that ES be included in Service planning, programming, and budgeting. But one DoD guidance document in particular, the DoD Instruction on Contractors, is the most direct about the role of ES in force planning: "The DoD Components shall rely on the most effective mix of the Total Force, cost and other factors considered, including Active, Reserve, civilian, host-nation, and contract resources necessary to fulfill assigned peacetime and wartime missions." This directive is not central to DoD force planning.

Army regulations 570-9 and 700-137 display a coherent view of WHNS and LOGCAP. They identify the potential for using WHNS or LOGCAP to offset Army combat support (CS) and combat service support (CSS) force structure and direct the Deputy Chief of Staff for Operations and Plans to consider WHNS and LOGCAP in

fulfilling his force planning responsibilities. Neither regulation suggests that WHNS or LOGCAP is a temporary source of External Support intended to be replaced by U.S. Army units when they become available on the Time Phased Force Deployment List (TPFDL).

The Air Force focus is on contingency contracts entered into during the contingency. We found no Air Force guidance on the use of WHNS.

U.S. Forces Korea (USFK) and CINCPAC reflect a common theme with regard to both WHNS and contingency contracting but do not address LOGCAP or related Air Force and Navy programs. The only regulation that directly addresses the concept of ES and its potential role in detail is the recently released CENTCOM regulation. This regulation discusses WHNS and contracting as a way of resolving shortfalls in supplies and services.

In general these authorities do not reflect a common approach or theme. The lack of a unifying DoD directive or other policy guidance on ES may be the reason for the apparent inconsistency with which the Army and the Air Force and the CINCs treat all forms of ES including WHNS and contingency contracting.

D. EXTERNAL SUPPORT IN THE GULF WAR

External Support was of critical importance for U.S. forces in the Persian Gulf War (PGW). Without External Support, the war could not have been fought as soon as it was or as well as it was. It is a historic fact that the CINC explicitly cut the size of the support force and delayed its arrival in order to give priority to combat forces. This was possible only because CENTCOM was able to use large amounts of External Support. If the United States had not been able to make use of local infrastructure, ports, airfields, trucks, oil, and water, military forces would have taken much longer to deploy to the theater and to prepare for military operations, and the process would have been much more expensive.

1. Prewar Plans for External Support

Except in two areas, no explicit preparations were made to acquire and use any form of External Support for U.S. military operations in Southwest Asia. The two areas for which substantial preparations had been made were construction and petroleum product supply.

Construction work to support military operations began in Saudi Arabia 40 years before the PGW started. In 1952, the U.S. Corps of Engineers began constructing a U.S. Air Force Base in Dhahran that was later turned over to the Saudi Government. In 1972, the Saudi Government asked the Corps of Engineers to manage the construction of a military infrastructure designed to provide for the security of Saudi Arabia. Under the supervision of the Corps, contractors were brought on board to design and construct ports, airfields, roads, and three massive military cities to house and provide support facilities for large military forces. King Faisal Military City was located in the South to face Yemen; King Abdul Aziz Military City was located in the Northwest to face a threat from Syria and Jordan; and King Khalid Military City was located in the Northeast to face a threat from Iraq and Iran. Naval and Air Force facilities were also expanded and improved.⁴

The Saudi Government spent at least \$14 billion to prepare facilities needed in the event of an attack from outside. This was fortunate, for when the United States and other Coalition forces arrived in Saudi Arabia, they found excellent port facilities, a reasonably good highway network, a telecommunications system, and a substantial number of buildings and other facilities to house the troops and administer the units. The prewar construction not only saved time and money, but it allowed the United States to reduce its engineer force structure in the theater below what otherwise would have been required. Forty years of preparation paid off in Operation Desert Storm not only in terms of what had been built but also in terms of the trust that had been built up between the Army and the Saudi Arabian Government.⁵

The Defense Fuel Supply Center (DFSC) made advance preparations to obtain petroleum and petroleum products from refineries in Saudi Arabia and elsewhere in the Persian Gulf in case of need. DFSC maintained a regional office in Saudi Arabia and kept in contact with possible sources of fuel in the Persian Gulf. The U.S. Navy had a long-standing open purchase order for fuel for the fleet in the theater, and this came in handy during the early days of the war before new contracts could be approved by the authorities in Washington, DC. In addition, the Army had formed special petroleum liaison detachments in the Army Reserve whose sole purpose was to obtain petroleum products from local sources in the event of a major regional contingency.

⁴ Lieutenant General Henry J. Hatch, Chief of Engineers, address at Lehigh University, 6 December 1991.

⁵ Ibid.

With these two exceptions, our research indicates that neither CENTCOM nor the Service components had done much planning and preparation for obtaining External Support in Southwest Asia.

2. Wartime Use of External Support

Despite the lack of planning, External Support was critical to the success of Operations Desert Shield and Desert Storm. ES allowed the Army to deploy combat forces more rapidly and to deploy fewer support units than would have otherwise been required to achieve the same results. ES was used widely for items large and small. It was applied across the board, and provided most of the support for some specific logistic operations.

At the beginning of Desert Shield combat troops were rapidly deployed to deter an Iraqi attack without the support units they needed to enable and sustain their operations. This shortfall was made up by External Support contractors who aided the debarkation, reception, and onward movement of the troop units. Food, water, engineering material, spare parts, latrines, trucks and buses, and temporary housing were supplied by local contractors.⁶ Most of the actions of the few logistical personnel in Saudi Arabia during the early parts of Operation Desert Shield were concerned with arranging for External Support.

Throughout the Gulf War, External Support was an essential part of the overall operation. All of the POL and water, most of the construction engineering, most of the port operations, and about 50 percent of the long-haul transportation was provided by External Support. The Army could not have made its historic flanking move without External Support. External Support assets supported Army units in both Iraq and Kuwait.

Redeployment also depended on External Support. External Support was responsible for cleaning equipment to pass U.S. Customs inspections; cleaning, folding, and packing tents; repairing facilities; clearing troop compounds; dismantling temporary structures; providing port services; handling retrograde movement of ammunition; providing flatbed trucks; and performing maintenance.⁷

⁶ Headquarters, VII Corps, "Lessons Learned: Reception of Soldiers (Billeting, Life Support, and Services): Host Nation Support," 10 May 1991.

⁷ Headquarters, 22nd Support Command, "ARCENT Contracting Command, Redeployment Contracts," Briefing Slide, 27 October 1991.

The degree of dependence on External Support during the Persian Gulf War varied according to the class of supply or service function. Table 3 shows the External Support functions organized into three categories of dependence suggested by our research.

Table 3. Relative Dependence on External Support by Function

<u>Functions for which External Support was CRITICAL</u>
Ammunition Supply
Barrier Materials Supply
Construction
Construction Materials Supply
Enemy Prisoner of War Operations
Heavy Equipment Transporters
Line Haul Transportation
Local and Short Haul Transportation
Maintenance
Petroleum Supply
Port Operations
Railway Operations
Repair Parts Supply
Tentage Supply
Water Supply
Wheeled Vehicle Supply
<u>Functions for which External Support was USEFUL</u>
Field Services
Food Supply
Medical Services and Supply
Quartermaster Field Service
Sundries Supply
<u>Functions for which External Support was TRIVIAL</u>
Air Delivery Operations
Combat Vehicle Supply
Individual Clothing and Equipment Supply
Personnel Service Support

Table 4 shows the numbers of selected types of Army support units that were actually deployed to Southwest Asia and estimates of the additional unit equivalents that were provided by External Support. If these estimates are regarded as a cost avoidance, they make up billions of dollars of savings to the United States. If the estimates are regarded as statements of need, it is clear that a lot more support was needed than was provided by the Army.

Table 4. Support Units and External Support Equivalents in Southwest Asia

	Army Support Units	External Support Equivalent Units	External Support Percentage
Air Drop Cos/Dets	6	-	0
Ammunition Cos	16	-	0
Cargo Truck Cos	83	80	50
Engineer Combat Heavy Bns	7	-	0
Engineer Construction Bns	-	12	100
Explosive Ordnance Dets	23	-	0
Field Svcs GS Cos	8	8	50
GS Supply Cos	18	10	35
Heavy Truck Cos	21*	26	55
Maintenance Dets	30	-	0
Maintenance DS Cos	47	25	35
Maintenance GS Cos	19	12	40
Movement Control Dets	69	-	0
Petroleum Supply Cos	19	20	50
Petroleum Truck Cos	29	32	53
Railway Battalions	-	5	100
Supply & Svc DS Cos	22	-	0
Terminal/Cargo Cos	14	20	60
Trans Dets	30	-	0
Water Dets	7	7	50
Water Supply Cos	5	5	50
Water Teams	21	21	50

* Includes 5 light-medium truck companies deployed without vehicles to operate commercial heavy equipment transporters.

A review of the table suggests that ES provided over 50 percent of the water, petroleum, and transportation capabilities, all of the railroad support, and most of the engineer construction support.

It was no simple matter to obtain the levels of ES shown in Table 4. Army logisticians performed miracles in providing these unprecedented levels of ES. They also learned many lessons that are applicable to the future. The *Command Report for Operation Desert Storm*,⁸ written by the Commander of the ARCENT Contracting Command, contains a few of these lessons:

- Contracting was more efficient than HNS in providing supplies and services in Operation Desert Shield and Storm.

⁸ Headquarters U.S. Army Forces Central command, Contracting Command, "Command Report for Operation Desert Storm," 22 April 1991.

- Contractors can provide a wide range of supplies and services, but prior planning is needed. Doctrine must be developed. Emergency financial provisions must be adopted. Responsibilities for contracting and contract planning must be assigned in advance. Contracting officers and NCOs must be trained and made available. Contracting organizations and command relationships must be established. Market surveys must be made.
- Efforts to transfer payment responsibilities to Saudi Arabia by relying on Host Nation Support failed because the Saudi system was unable to provide timely support. Although Saudi Host Nation Support was effective for obtaining fuel and food, efforts to expand Saudi HNS to other areas were unsuccessful. The Army found that it was much easier and more efficient to enter into direct contracts between the Army and individual contractors than to establish a Host Nation Support arrangement. The Saudis ultimately paid for the support via a direct payment to the U.S. Government.

E. CURRENT STATUS OF EXTERNAL SUPPORT PLANNING

1. Planning for War in Southwest Asia

Following the Gulf War, CENTCOM returned to its previous practice and did not complete detailed plans for External Support (ES). Until recently, no one in the CENTCOM organization was responsible for Wartime Host Nation Support (WHNS) or ES planning. As a result the CENTCOM war plans and the Army's program plans did not include detailed plans for significant amounts of ES even though there was a recognition that U.S. plans for a war in Southwest Asia were dependent on extensive ES.

In 1996 CENTCOM organized a WHNS office in the office of the J-4 and began efforts to plan for WHNS and for ES more generally. Since that time CENTCOM and its Service component staffs have identified their "needs" for External Support, communicated those needs to the local governments, and begun the process of attempting to arrange for support from local governments (WHNS) and contractors (contingency contracts). The command has not entered into any WHNS agreements to date. The relatively low importance still assigned to External Support by CENTCOM planners was confirmed by a July 1997 CENTCOM briefing to the Army WHNS conference which made three key, if somewhat conflicting, points: WHNS is critical only in the early phase of the war; WHNS augments but does not offset CSS forces; and WHNS cannot be relied on. This briefing did not address contingency contracting.

In addition to the WHNS office in CENTCOM, there is a contracting office that is primarily concerned with contracting for peacetime support. The chief of the contracting

office in CENTCOM indicated that he was working on some contingency contracts but that there were no signed contracts as of September 1997. In the absence of signed contracts they assume that existing contracts will be continued and that services and materiel will be obtained through Blanket Purchasing Agreements. They also assume that fuel will be provided as assistance in kind in the amounts necessary.

2. Planning for War in Northeast Asia

a. Planning in Korea

Wartime Host Nation Support. As described in the introduction, U.S. Forces Korea (USFK) depends on Korean support in essentially all support activities. The WHNS program run by USFK has detailed oversight of 12 separate WHNS programs that provide for such specific items as the number of water bottles to be delivered per day per location; the number of tons of ammunition to be moved from point to point in the early days of the war; and the number, timing, and location of Korean ships, aircraft, and commercial vehicles that the Republic of Korea Government (ROKG) will make available to U.S. forces.

Table 5 represents the current state of ES planning. The table shows only WHNS that has been approved by the Korean government. USFK has submitted a request to the ROKG that is reported to represent a significant increase in the amounts of WHNS.

The many types of ES incorporated into U.S. operations in Korea in peacetime and the additional ES planned for wartime make it difficult to estimate the equivalent number of U.S. forces that would be required to replace or offset current levels of ES. According to our information, the USFK has made no attempt to calculate the value of ES in terms of equivalent U.S. units and has based its planning on the concept of "augment but not offset," which does not recognize the contribution that WHNS makes to the demand for support forces. We also know that the Department of the Army has not included ES in its future year force planning. Thus, Table 5 most likely represents a rough estimate of the U.S. forces that may be unnecessarily included in U.S. deployment plans. If, however, ES capabilities have been included in U.S. force plans, the table represents the U.S. forces that would be required to replace the Korean ES currently planned for a war in Korea.

Table 5. Korean External Support Converted to Equivalent U.S. Forces

Type of ES	Number of Equivalent U.S. Units	Number of Equivalent U.S. Personnel
Commercial Vehicle Program	9 cargo & POL truck companies	1,500
Engineer Support Program	4 combat heavy battalions	2,600
Direct Hire Personnel	N/A	3,000
Korea Service Corps	144 companies	20,000
KATUSA	augmentations to U.S. units	9,000
Security Guards	9 MP companies	1,600
Commercial Aircraft Program	1 strategic airlift squadron	Unknown
Commercial Ship Program	37 ships	Unknown
Buildings	2 million square meters	Unknown
Communications	400 local, long distance, & international circuits	Unknown
Total Equivalent Personnel*		37,700

Note: These estimates make no allowance for expected operational availability.

* Does not include the Wartime Movement Requirements Program or support to support, which could add another 25,000 to 50,000 equivalent personnel.

Contingency Contracting. The commander of Contracting Command Korea (CCK) informed us that contingency contracting is an important part of his mission that he is anxious to fulfill but that he is waiting to hear from his customers on the types of services and supplies they want. To date he has no contingency contracts in force. He has been able to identify 15 existing contracts that contain a war continuation clause, and 77 other contracts that the customers believe should contain a war clause. Only one of the 15 contracts has been approved by the ROK Government. The CCK commander also stated that a survey of 271 stateside awarded contracts had revealed 29 that were required in wartime but none that had the necessary wartime clause or that had made provisions to continue in wartime.⁹ The commanding officer of CCK reports that he can do nothing more until the logistic planners give him a "requirement." The USFK planners do not appear to consider contingency contracts an appropriate way to plan for logistic support to U.S. forces.

The commander of the Air Force contracting squadron in Japan, who is responsible for all U.S. military contracts in Japan, indicated that he had no responsibility for contingency contracting, that there were no contingency contracts in existence, and that he was fully occupied with contracting for peacetime, day-to-day support.

⁹ COL Leroy B. McMillen, Assistant Chief of Staff Acquisition Management, *USFK Wartime Critical Contracts and Contingency Contracts*, USFK Wartime Critical Contracts and Contingency Contracts, 14 May 1997.

Wartime Movement Requirements Program. In addition to the WHNS program, there is the Wartime Movement Requirements Program in which the U.S. forces list their wartime movement requirements. These requirements include the movement of hundreds of tons of ammunition from storage sites to wartime locations, the evacuation of noncombatants, the movement of non-self-deployable unit equipment and supplies from the ports of debarkation to the tactical assembly areas, and the movements of sustainment supplies from the posts to the units. According to current plans these movement requirements will be met by U.S. transportation assets, the ROK Army Transportation Support Command, and the Korean National Railroad. Since there are few U.S. transportation assets in Korea in peacetime, the bulk of the responsibility for early wartime movements will fall on the ROK.

The ROK Army Transportation Support Command, in wartime, includes the equivalent of roughly 80 U.S. cargo and POL truck companies equipped with mobilized civilian vehicles (over 4,000 12-ton trucks and 700 5,000-gallon tankers) plus other units equipped with over 400 45-passenger buses. This is the equivalent of about 13,000 American soldiers.

In addition, and perhaps more important for the rapid delivery of U.S. Army combat forces, the Korean National Railroad, which controls all the rail assets in Korea, will also provide transportation support to U.S. Forces. Most U.S. Army track vehicles will be transported by rail from the ports to the tactical assembly areas. All of the transportation support provided U.S. forces by the ROK Army and the Korean National Railroad WHNS even though it is not specifically listed in the official USFK WHNS program is a de facto part of the WHNS program. Indeed, the transportation assistance program may be the largest piece of the WHNS program. Given the ROKG's control over the economy, additional transportation assets would likely be available if necessary.

b. Planning in Japan

U.S. forces in Japan and those forces, mainly air and naval, that will arrive in Japan to support the war in Korea are also heavily dependent on External Support. To date, political problems in Japan have prevented the Japanese from agreeing in advance to support U.S. war efforts in Korea. As a result there are no specific agreements for External Support to U.S. forces in Japan. War planners in Japan, aware of their dependence on ES, are currently forced to base their ES plans on the expectation of reaching agreements in the midst of the crisis or war.

The recently announced update of the 1976 *U.S.-Japan Guidelines for Defense Cooperation* should allow U.S. planners to reach detailed agreements with Japanese planners on the specific support available from Japanese government, military, and civilian assets.¹⁰ Changes in Japanese law necessary for the implementation of the new guidelines may come as early as the spring of 1998.

The new guidelines open the way for major increases in the levels of Japanese External Support "in situations in areas surrounding Japan" including, of course, Korea. Among support elements included in the guidelines are cooperation on NEO; use of Japanese Self-Defense Force facilities and civilian ports and airports for supplies and other purposes; provision of materials and POL to U.S. vessels and aircraft; use of vehicles and cranes for transportation of materials, personnel and POL; land, sea, and air transportation inside Japan of materials, personnel, and POL; resupply of U.S. ships at sea; repair and maintenance of U.S. vessels, aircraft and vehicles; provision of repair parts; provision of tools and materials for maintenance; medical treatment of casualties inside Japan; transportation of casualties inside Japan; provision of medical supply; security of U.S. facilities and areas; provision of frequencies (including for satellite communications) and equipment for communications among relevant Japanese and U.S. agencies; loading and unloading of materials; temporary increase of workers at U.S. facilities and areas. Implementation of the Guidelines should allow Japan to provide a full range of ES and should lead to a major reevaluation of the potential Japanese role in a war in Korea.

3. Constraints on Effective ES planning

IDA's research has identified two significant obstacles to improved planning for ES: unresolved issues regarding payment responsibility, and concern among many planners that ES could be used to offset or otherwise reduce Army force structure. Each of these obstacles is explored below.

a. Payment Responsibility Issues

In Korea, the biggest impediment to the effective use of WHNS is debate over who pays for the support provided. At the current time, negotiations on Technical Agreements necessary for updating and expanding existing agreements have been stalled by a failure to agree on arrangements for payment. The Umbrella Agreement (signed by

¹⁰ *U.S.-Japan Guidelines for Defense Cooperation*, New York, New York, 23 September 1997.

Secretary Cheney in 1991 and ratified by the ROK parliament in 1992) specifically addresses the concept of cost sharing and declares that both sides are willing (1) to share the costs associated with additional or unforeseen WHNS (Article 8); and (2) to identify payment responsibilities in existing agreements, enter into new payment agreements if no agreements exist, and renegotiate existing agreements if the payment responsibilities are not adequately defined (Minute to the Umbrella Agreement). Despite this clear statement in the Umbrella Agreement, an attorney in the office of the USFK Judge Advocate issued a letter opinion in October 1996 that states, "Support to U.S. deploying forces will be at no expense to the U.S. since WHNS is considered to be part of the host nation contribution to its own defense."¹¹ This letter has limited U.S. negotiation flexibility since that time.

In recent efforts to move beyond the constraints of the October 1996 letter and to complete new WHNS Technical Agreements, the Department of Defense has suggested to the Korean Ministry of National Defense that final resolution of payment responsibilities be deferred to the end of the war. The ROKG has not yet agreed to this proposal and is not likely to readily do so. The immediate burden of paying for WHNS support under such an agreement would clearly lie with the ROKG, which would have to be satisfied with a U.S. *promise* to enter into an equitable cost sharing agreement at the end of the war.

An alternative solution might be to address the payment responsibility issue in two parts: an agreement for equitable allocation of costs at the end of the war, and a separate agreement for cost allocation in the short term. There appears to be a basis for this type of approach in existing WHNS agreements that contain plans for cost sharing. These agreements typically have the ROK providing the equipment and the U.S. paying the operating costs. In some cases, such as the Wartime Movements Program, the Koreans will use mobilized civilian equipment organized into ROK military units to move U.S. goods and will pay all the costs. In other cases—those not directly consistent with the definition of WHNS, such as contingency contracting—the U.S. pays the full cost of the service.

The precedent for cost sharing agreements has been well established in Europe. In the German Host Nation Support Agreement, for example, the United States agreed to provide most of the equipment and Germany agreed to provide 90,000 German Army

¹¹ Memorandum for Assistant Chief of Staff J-4 from Donald A. Timm Attorney Advisor, 31 October 1996, Subject: Wartime Host Nation Support Cost Sharing.

reservists to train on the equipment in peacetime and to operate the equipment in wartime. In the Gulf War, most of the ES was provided by contractors under contract to the U.S. Government. U.S. contracting officers paid the contractors directly for these support services—direct payment was essential for obtaining responsive support. At the end of the war, in the final accounting, the Saudi government repaid the U.S. Government according to the Saudi support agreements.

Another approach to resolving the cost sharing problem could involve the War Reserve Stocks for Allies (WRSA) program. Under the provisions of this program the United States stores billions of dollars of ammunition in Korea that it will give the Koreans in a war. Under current policies the ROKG will owe repayment for any of these supplies that it uses in a war. The reality is that this ammunition has little or no value to the United States and could be given to the Koreans in return for their agreement to pay for more of the WHNS program.

Finally, in a larger economic context, the costs of WHNS will be dwarfed by the overall costs of the war and by the economic aid that will be likely be provided by the United States and other allies.

b. Planners' Concern for Army Force Structure

Although U.S. Army regulations on WHNS and LOGCAP specifically provide for using WHNS and contractors to offset Army force structure requirements,¹² Army planners have argued that ES should not be used to offset or otherwise reduce Army force structure. This theme dominated many of our discussions in Korea as well as a 1 July 1997 WHNS conference held in Washington by the Department of the Army force development office. At that conference both the USFK and the CENTCOM representatives stated, "WHNS should be used to augment, not offset Army force structure." As a statement of policy, these words appear to mean that ES in general should be used to fill shortfalls but not as a justification to cut existing forces. Similar concepts are written into the USFK WHNS regulation, which states, "WHNS is not intended to replace U.S. units on the TPFDL."

In Korea the USFK bases ES policy on its interpretation of the following statement in the U.S./ROK Umbrella Agreement: "Unforeseen WHNS will be supported

¹² See Appendix A.

according to ROK availability of assets and will continue until such time as the U.S. may fulfill the function through U.S. logistic units deployment or by other means (*sic*).” A reading of the complete agreement does not seem to justify this interpretation. The statement quoted above is specifically about “unforeseen WHNS” and not preplanned WHNS. A more applicable statement is the definition of WHNS, which describes the purpose of WHNS as “the reception, onward movement, and sustainment of U.S. forces in times of crisis, hostilities, or war...” and has no cutoff provisions.

This concept of “augment but not offset” is, in fact, in contravention of the existing Army HNS regulation, AR 570-9, dated October 1990. As described above, this regulation states that HNS offsets to existing Army force structure must be based on “reasonably assured WHNS,” where “reasonably assured” is defined as depending “upon the conclusion of a formal WHNS agreement between the governments of the United States and the host nation.” Army planners argue that the agreement signed by the ROK Defense Minister and Secretary of Defense Dick Cheney and ratified by the ROK Parliament does not meet the definition of “reasonably assured” because the technical agreements associated with the Umbrella Agreement have not been signed. The Army regulation goes on to say that, when “planning and programming beyond the current force,” offsets to Army force structure will “be based upon projected U.S. Army force shortfalls and coordinated DA and Joint Chief of Staff estimates of future WHNS potential to satisfy these shortfalls.”¹³

The concern for force structure appears to manifest itself in other ways. For example, while recognizing that ES is essential in the early days of a deployment because it is impossible for U.S. CSS forces to be moved to the theater as rapidly as necessary to support the combat forces that have first priority for strategic lift, many planners suggest that ES assets cannot be counted on in the later days of the war or cannot be counted on to go as far forward as necessary.

There is nothing in the Umbrella Agreement to suggest that planned HNS has a cutoff date or even that unforeseen HNS might not be continued if the U.S. agreed to pay for the services provided. Indeed, the key obstacle to keeping all forms of Korean HNS available is most likely the ROK desire to obtain some compensation for the services provided. Certainly it is reasonable to expect that civilian contractors who are fully paid by the U.S. will continue to work. Such work may be all that is available if the war shuts down major parts of the Korean economy, as appears likely.

¹³ Army Regulation 570-9, 9 October 1990, Section 5d, page 4.

The concern over how far forward to count on ES appears to be overstated as well. The entire ROK population between the ages of 20 and 60 and the entire ROK economy are subject to the control of the government in wartime. It seems reasonable to presume that ROK ES assets will go where they are told, especially those mobilized into military units and those under direct military control. Moreover, since most ES is intended to operate in the rear areas at echelons above corps (EAC), the question of how far forward ES can be used is not a major constraint. Where the issue may be appropriate, as in the case of transportation units, the question needs to be directly addressed. In the case of the ROK transportation command, civilian trucks are to be organized into military units that will, presumably, go where they are told to go. If the civilian trucks are not physically capable of going into the forward area, they are still capable of providing transportation support in the rear areas, and military truck units can operate in the forward areas.

Another issue often raised is that ES personnel have no nuclear, biological, and chemical defense capabilities. While this is true, it is not the fault of ES personnel. If the U.S. military is to rely on ES, it would seem obliged to ensure that ES personnel are provided essential equipment and training.¹⁴ U.S. forces had this problem in the Gulf War and ultimately provided gas masks for essential civilian drivers. At a minimum, U.S. forces should stockpile equipment for ES personnel who take the place of Americans.

Finally, it is a fact that U.S. military officers naturally feel more comfortable with units that are made up of fellow Americans and that they command. External support primarily comes from Korean personnel who may or may not come under U.S. command. Becoming accustomed to working with Koreans, learning their ways, and learning to rely on them takes time. We were told many times that personnel turbulence—U.S. general officers typically stay less than 2 years, other senior officers with families stay 2 years, and 95 percent of U.S. personnel stay only 1 year—does not allow enough time for Americans to get to know Koreans and contributes to the lack of confidence in ES. In other words, if it is not American, if you don't command it, and if you don't stay around

¹⁴ While in Korea we met staff officers who were attempting to obtain individual equipment and personal weapons for the KATUSA soldiers who would be mobilized in wartime and assigned to arriving U.S. units.

long enough to become confident in it, you aren't likely to trust it. This does not mean that Americans can never learn to rely on ES. The experience in the Gulf War shows unequivocally that they can learn very quickly to rely on ES.

F. POTENTIAL LEVELS OF EXTERNAL SUPPORT

This section discusses our estimates of the potential levels of ES that might be obtained in the two planning theaters.

1. Potential for Southwest Asia

Current CENTCOM plans assume that the amount of External Support that will be available in a future war will be equivalent to that obtained in the Gulf War. In that case, Army force planning should work to achieve the level of ES shown in Table 6.

Table 6. ES Equivalent Units for CENTCOM/Army Planning

Equivalent Units	No. of Units	No. of Personnel
Cargo Truck Cos	80	16,500
Engineer Construction Bns	12	9,000
Heavy Truck Cos	26	6,000
Laundry and Renovation	7	1,000
Maintenance - non-divisional, wheel vehicles, engineer and construction equipment		15,000
Petroleum Cos	20	5,200
Petroleum Truck Cos	32	7,400
Quartermaster Field Service	20	2,200
Railway Battalions	5	1,040
Terminal/Cargo Cos	20	6,925
Water Dets	7	520
Water Supply Cos	5	975
Water Teams	21	400
Support to Support - 30% Factor		21,600
Total WHNS Potential		93,000

In addition to these unit equivalents, it seems reasonable to set as a goal the development of ES to meet other needs. These functions could be added to the list of "requirements" that CENTCOM has developed for discussion with the host nations. Alternatively, contingency contracts and LOGCAP contracts might be able to provide much of the rear area supply and maintenance support operations as well as military

police functions in the rear areas.¹⁵ In addition, as in the Gulf War, communications facilities—both long-haul and rear area tactical level communications—could be provided by local firms or by U.S./international communications firms. Table 7 lists the functions that appear to be conducive for conversion to some form of ES and the number of soldiers associated with those functions in the TAA03 troop list.¹⁶

Table 7. Additional Functions and Populations Susceptible to Conversion to External Support in Southwest Asia

Functions	No. of Soldiers in TAA03 Troop List
Military Police - non-divisional, general support	13,000
Materiel Management	750
Medical Logistics	3,500
General and Heavy Supply	1,600
Total	18,850

Another aspect of ES not listed in Table 7 is the provision of food service support. Use of local food service support will reduce the Services' dependence on packaged meals (MREs) and could allow the Army to avoid an otherwise necessary multimillion dollar investment in Unitized Group Rations.¹⁷ Major international corporations provided much of the food service paid for by the Saudi government during the Gulf War and currently provide much of the food for American personnel in Bosnia. Prior planning could provide assurance of large-scale food service support in Southwest Asia. This form of ES could reduce the need to stockpile MREs and could reduce the total number of food service personnel the Services bring to the theater.

In addition, local procurement of such resources as engineering, construction, and barrier materials, along with current plans for obtaining POL and water, will reduce the burden on the U.S. supply and transportation systems and will reduce the overall cost of the war.¹⁸

¹⁵ The recent CENTCOM briefing on WHNS suggested that the other Services should use WHNS to provide some of the support they might expect from the Army in its role as the Wartime Executive Agent.

¹⁶ See Appendix A for a specific list of the units that make up these numbers.

¹⁷ Tillson, et al., *IDA Review of the Army War Reserve Program*, IDA Paper P-3310, Institute for Defense Analyses, April 1997.

¹⁸ At this point in our analysis we have not identified the extent of Navy, Air Force, or Marine Corps dependence on ES or the potential to expand their current use.

2. Potential for Northeast Asia

a. Korean and Japanese Capabilities to Provide External Support

The ROK has a well-developed industrial economy. It has a solid infrastructure of ports, internal transportation, energy, and communications. It has a disciplined, skilled work force and aggressive companies producing steel, chemicals, ships, automobiles, consumer appliances, and electronic parts. It is largely self-sufficient in food and has a large service sector. Overall, the ROK economy has developed to a scale that dwarfs potential U.S. requirements for external logistics support. The Korean economy possesses at least 10 times the maximum U.S. Army requirement for such resources as port capacity, trucks, construction engineers, drivers, oil products, and potable water.¹⁹ Some of this capacity, e.g., the ports, is already planned to provide ES to U.S. forces, and with additional prior planning, much more of this capacity could be made available to provide ES to U.S. forces in the event of a war.²⁰

During a war, the National Emergency Planning Board (NEPB) will manage the ROK economy and ensure that its resources are allocated in accordance with national priorities. Certainly, support to U.S. forces will be assigned high priority along with support to ROK military forces. It should be remembered, however, that the war will profoundly disrupt the Korean economy and that competing claimants will vie for available resources. That is, in addition to prosecuting the war, the ROK government must sustain the civilian population and safeguard postwar economic strength. For this reason it is essential that the U.S. plan its requirements for external support and gain advance commitment to meet them.

The war will disrupt the Korean economy. Estimates given to U.S. WHNS negotiators by the ROK Ministry of Defense suggest that, in a war, total GNP of about \$450 billion would decline about 25 percent to about \$340 billion. The government's

¹⁹ U.S. requirements are compared with ROK capabilities in J. C. Tillson, et al., *Review of the Army Process for Determining Force Structure Requirements*, Volume 1, *Main Briefing*, IDA P-3189, 1996.

²⁰ As of January 1998, it appears that the economic crisis in Korea will impact the financial standing of Korean corporations and may cause bankruptcies, but will not impact on the physical assets such as trucks, etc. that are essential for ES. Korean firms may be more interested in entering into support contracts with U.S. forces. The Korean government may be less willing to provide WHNS without compensation.

share of GNP would increase from 15 to 50 percent, or from about \$68 billion to about \$170 billion, and military spending would increase nine times from about \$15 billion to \$133 billion in 1995 dollars.²¹ These numbers suggest that the ROK government will take over a significant portion of the economy to support the war effort but that a significant amount of economic capacity will remain available for non-governmental purposes. This reduction in GNP represents some mix of supply-side disturbances and reduced demand for Korean products and services. On balance, it is not clear whether the economy will be characterized more by idle factories or product shortages. In either case, it does appear that there will be significant economic resources that might be made available to provide ES to U.S. forces in Korea.²²

Some of the areas where ES is most important are the same areas that are critical to the ROK economy as well as to the ROK war effort. This is the reason why reliance on large amounts of "unanticipated WHNS" is risky and prewar planning is necessary.

- The ROK has significant road and rail transportation assets as well as the supporting maintenance and supply infrastructure that are critical both to the economy and to the war effort. A substantial decrease in goods production associated with the war should reduce the need for trucks and railroads to transport materials and products. It therefore appears that adequate transportation resources might be made available to meet most U.S. needs. However, war-related delays, congestion, and uncertainty will increase turnaround times and increase the number of trucks needed to support a given level of production. Thus, while the NEPB can provide the trucks and trains needed by U.S. forces, it is not obvious how their use to support U.S. forces would affect the ROK economy. If these trucks and trains would otherwise be idle, then it is in the interest of the ROK economy to keep these assets

²¹ Estimates given to U.S. WHNS negotiators by the ROK Ministry of Defense during recent negotiations on WHNS.

²² A major uncertainty is whether the Korean government will attempt to maintain export production. There are strong national reasons for doing so, including earning foreign exchange to service foreign debts and pay for critical imports as well as protecting hard-won positions in foreign markets that will be essential to Korea's economic strength in the postwar period. If the ROK does assign a high priority to continued export production, it can partially protect export factories from manpower call-ups and power shortages and give them some priority in obtaining inward and outward transportation services. Of course, while the ROK's survival is at risk, export production cannot be allowed to affect the war effort adversely. However, if a North Korean attack is halted and the future course of the war seems predictable, government planners may raise the priority they place on preparations for postwar economic activity.

productively employed. If they would otherwise be employed in supporting the economy, then their use to support U.S. forces would be at a cost to the economy. This is also true for the associated maintenance and supply infrastructure.

- The ROK economy employs about 1.5 million Koreans in the construction industry. The construction industry makes up about 14 percent of the ROK GNP. A war would likely stop most construction activity that was not war related. Stopping this activity would have a significant impact on ROK economic well-being. While many construction workers would be mobilized for the war in combat jobs, many could be employed more productively in providing construction and engineer support to the ROK and U.S. war efforts. With prior planning, it appears that enough people and equipment, either in a civilian or a military status, could be mobilized to meet U.S. needs. The use of these economic assets in this way would likely be of economic benefit to the Korean economy if these assets would otherwise be idle.
- Civilian demand for oil products is about 1.8 million barrels per day. These products are used for transportation (29 percent) and for industry (40 percent). The consumption of these products should drop as personal automobile travel is restricted and as industrial production levels fall. This drop in consumption should free up significant Korean oil products as well as oil handling, transportation, and storage capabilities for the war effort. Although import reductions and war damage may curtail supplies as well as reduce handling, transportation, and storage capabilities, significant capacity should be available to support U.S. forces.
- The ROK plans to mobilize some 4 million men in the Homeland Reserve Forces and 5 million more in the Civil Defense Corps, supplementing a standing force of some 750,000.²³ Many of these mobilized forces will be available for rear area security and support jobs. To some extent, these mobilized Koreans can take the place of U.S. military personnel conducting

²³ See Embassy of the Republic of Korea, "The National Defense of Korea," <http://korea.emb.washington.dc.us/korea/>, July 1997.

the full range of rear area support jobs. There are already plans for KSC units to install portable oil pipelines (IPDS), and they can take over more of these functions.

The Japanese capability to provide ES is limited only by the constraints of the Japanese constitution and by geography. The Japanese currently provide about \$5 billion per year in peacetime Host Nation Support. They provided significant levels of monetary support during the Gulf War. The new *Guidelines* agreement should result in significant increases in the amounts of ES that can be provided, especially inside Japan. The Air Force, which plans to operate virtually all of its nonfighter aircraft from Japan, may be the biggest customer for expanded ES in Japan, but the Army, with its logistic bases and the potential for using Japanese hospitals, could also be a large customer.

b. Potential Levels of ES for the Army in Korea and Japan

We reviewed the TAA03 troop list to identify Army units and functions that appear to be susceptible to conversion to External Support in Korea and Japan. Our review revealed a potential level of ES of about 123,000 soldiers. Table 8 shows a functional breakdown of this number. A list of the specific units that were identified as susceptible to conversion may be found in Appendix B. In selecting units for the list, we considered the following criteria: Was this function performed by ES in the Gulf War? Does ES currently perform this function in support of U.S. forces in peacetime? Is this function scheduled to be performed by WHNS or other forms of ES in support of U.S. contingency plans? Is this function included in the LOGCAP statement of work? Command and control headquarters, division and corps level support units, and highly technical maintenance units are not included in this list.²⁴

TAA03 made little provision for ES and, therefore, included significant numbers of soldiers whose functions would be performed by some form of ES. As a consequence, Table 8 must include some overlap with the existing ES listed in Table 5. Certainly there must be some overlap between the 20,000 transportation soldiers listed in Table 8 and the equivalent soldiers provided by the Commercial Design Vehicle Program and the Wartime Movement Requirements Program. CINC and Service force planners will have to perform detailed assessments to identify the potential overlaps.

²⁴ Given its size and broad coverage, the list does not include the 30 percent support to support that was included in the Southwest Asia list.

**Table 8. Functions and Populations Favorable for Conversion
to External Support in Northeast Asia**

Function	Population
AG Postal	1,300
Engineer	13,000
Hospitals, 6 in Japan	3,000
Maintenance	13,000
Military Police	11,000
Ordnance	2,000
Quartermaster	21,000
Signal	10,000
Transportation	20,000
Other	1,500
Support to Support - 30% factor	28,000
Total Potential Conversions	123,000

3. Potential Levels of External Support in Both Theaters

Combining the estimates of potential ES in both theaters suggests that the total potential level of ES for the U.S. Army in these two MTWs is over 200,000 soldiers. If fully implemented, this would more than make up for the shortfall in CSS forces the Army identified in TAA03. This level of ES would amount to a roughly 30 percent reduction in the number of U.S. Army personnel and a major reduction in support equipment that would have to be deployed to both theaters. It could also lead to a faster closure of Army combat forces and a savings in strategic lift forces. It could eliminate the uncertainty over the Army's ability to meet the simultaneous demands of two MTWs. At a minimum, given the uncertainty about the availability of combat service support when either of the two theaters is the second of two MTWs, it appears appropriate for planners in both theaters to work toward achieving much higher levels of ES.

While it may be appropriate to reduce CSS forces as levels of assured ES increase in a theater where the United States has a long-term military presence and the ability to make detailed plans with the host governments and local contractors, it would not be appropriate to remove these forces from the force structure if their removal would reduce the Army's ability to support itself and the other Services as needed in a theater or mission not currently specified in planning scenarios. The potential to make changes in Army force structure of this size does suggest, however, the necessity to investigate other scenarios to determine the potential for ES to meet Army needs in an expanded set of 21st century scenarios. Indeed, major changes of the kind suggested here could be made only over time as Army and joint planners become more familiar with the uses of ES and have

the time to make detailed plans and arrangements. Over the long term, however, it appears that it is possible to make substantial reductions in the number of soldiers needed for CSS functions and in the life cycle cost of performing those functions.

While we have not been able to analyze the other Services in detail, it appears that significant reductions might also be possible at least in Air Force support forces. The Air Force has the ability to contract for much of its support. In Southwest Asia, for example, the Air Force might contract for many services on local air bases. In Northeast Asia, as the *Guidelines* agreement between the United States and Japan is implemented, significant portions of Air Force support forces in Japan might also be converted to ES. Similar changes might also be made in Korea, where, in a war, the Air Force plans to have Air Force personnel perform the vast majority of its support functions despite the fact that most of these functions are performed by Koreans today.

4. Potential Impact of CSS Reductions on Army Budget and Strategic Lift Requirements

In order to determine the potential budget and strategic lift impact of CSS reductions on the size contemplated above, we conducted an analysis of the Northeast Asia troop list contained in Appendix B.

First, using the Army's Force Cost Model, Version 96.1, we determined that the average annual saving in the Military Personnel account for every soldier removed from the force would be \$6,300 for Reserve Component soldiers and \$36,100 for Active Component soldiers. We also calculated the impact of these reductions on operating and support costs and determined that the average annual savings would be about \$4,000 per Reserve component soldier and about \$9,400 per Active component soldier. Thus we conclude that the overall saving for every RC soldier would be \$10,000 and \$45,000 for every AC soldier. We also computed an average equipment investment cost of \$84,000 per soldier. These savings are all in FY97 dollars.

Next we used the TAA03 troop list that contains both the TOE manpower strengths and the weight of each unit to determine the weight of the units on the troop list. The total weight of the over 1,300 units and 95,000 soldiers²⁵ was about 465,000 short tons. In terms of personnel, this is equivalent to about 5.5 heavy divisions. In terms of equipment, about 4.5 heavy divisions. Although it seems surprising that CSS units could weigh almost as much per soldier as a heavy division, a closer look reveals that there are

²⁵ Does not include support to support soldiers.

a significant number of heavy CSS units in our list. Table 9 compares some of the key CSS units with a nominal heavy division. One of the reasons the weight per soldier is so large may be that we include much of the heaviest CSS equipment in the list but leave out most of the command and control units associated with these units.

Table 9. Short Tons Per Soldier

Unit	Unit Weight in Short Tons	Number of Soldiers	Short Tons Per Soldier
Heavy Division	100,000	17,000	5.9
Combat Heavy Engineer Battalion	4,552	652	7.0
Pipeline Construction Company	846	166	5.1
Port Construction Company	3,091	201	15.4
MP Combat Support Company	260	177	1.5
Non-divisional maintenance company	1,056	200	5.3
Ammunition company PLS	1,137	173	6.6
Petroleum supply company	1,327	202	6.6
Field Service company	376	108	3.5
Trailer transfer point	101	16	6.3
Light/medium truck company	1,254	167	7.5
Medium truck company	1,926	175	11.0
Total for all CSS Units	465,000	95,000	4.9

We next computed the demand for strategic lift created by this force. Given that it takes about five of the new class of Large Medium Speed Ro Ro (LMSR) ships that are now under construction to carry a single heavy division, we concluded that moving those 95,000 soldiers and their equipment to Korea would require about 20 LMSR sorties.²⁶

Since the mix of units for Southeast Asia was very similar to the Northeast Asia mix, we concluded that it was appropriate to apply these same factors to the Southeast Asia troop list.

Should an emphasis on obtaining assured levels of External Support in each of the two major theaters result in a reduction of the Army CSS requirement of 100,000 soldiers for both theaters, and the reductions be taken equally from the Active and Reserve components, the savings to the Army budget could amount to about \$2.75 billion per year in personnel and operating accounts.²⁷ Savings in investment either to buy equipment not yet in hand or, over time, to replace existing equipment would be about \$8 billion. In

²⁶ Lift requirements are normally based on the unit footprint in terms of square feet. Our troop list only provided unit weight. Given the lower density (lb/ft³) of CSS units, the potential reduction in the demand for strategic lift could be as much as 50 percent greater.

²⁷ About \$500 million per year if all reductions are made in the R.C.

peacetime some of these savings could be used to contract for peacetime External Support, to pay the peacetime costs of assured wartime External Support, or, as in the German model, to purchase equipment that might be stockpiled in a theater for use by WHNS personnel in support of U.S. forces.

G. THE NEED FOR TRUE TOTAL FORCE PLANNING

Many planners believe that Total Force Planning involves only planning for Active and Reserve component forces. This is too narrow a view. Active and Reserve component forces alone cannot provide the resources needed to support U.S. military operations around the world. As this study has shown, U.S. military forces cannot perform their missions without many other elements of the Total Force:

- Military and civilian personnel from other countries support and otherwise facilitate U.S. military operations in peace and war. These personnel are especially important early in a war because they facilitate the rapid arrival of combat forces.
- U.S. and foreign contractors are used to provide a wide range of services from working in the kitchen to performing maintenance on the most advanced weapon systems.
- U.S. firms provide aircraft and ships to DoD in an emergency. Foreign ships and aircraft may be provided either as WHNS or on contract.
- Each of the Military Departments has a large number of civilian employees whose support is critical to their operations in peace and war, in the United States and overseas.

The research we have conducted for this study suggests that External Support can be a major element of the U.S. Total Force:

- External Support allows for more rapid deployment of combat forces. Host nation air and sea ports, cargo handling equipment, and transportation facilities allow initial U.S. combat forces to get into action quickly without having to wait for a build-up of military support units. U.S. aircraft as well as U.S. and foreign flag shipping are essential for the rapid delivery of U.S. forces.
- External Support reduces the investment and the operations and support cost of potential military operations to the extent that it allows a reduction in U.S. military forces without a reduction in wartime capability. NATO host nation support allowed the United States to increase the number of U.S. combat forces relative to U.S. support forces in NATO and to promise to have 10 divisions in Europe in 10 days.

- Materiel provided by External Support reduces the amount of materiel the United States may have to place in war reserve stockpiles, and, in many cases, provides the materiel more rapidly than it can be obtained from the United States.
- External Support provided in the theater does not have to be moved there and thus reduces the need for strategic lift forces.
- External support provides some skills and equipment not found in military forces. It is costly to provide military units to cover every possible need for military operations. It is better in some cases to plan to rely on External Support for capabilities, such as heavy construction, that can be provided by nonmilitary personnel.
- Planning and preparing for External Support can provide significant peacetime savings even when, as in contingency contracting and LOGCAP, DoD must pay the full wartime cost. This is because DoD does not have to pay the life cycle costs of maintaining the capability. Even when we pay some peacetime costs, as in maintaining equipment for ES personnel, the costs for ES are generally less than the costs of U.S. military forces, whose salaries are higher and whose support to support costs are higher. In cases where the cost of ES is shared or borne entirely by the host nation, the peacetime savings are even greater.

Our research also shows that the use of External Support imposes certain obligations on the user:

- External support personnel must be provided adequate personal protection equipment and training in its use. In the Gulf War, for example, American Civil Reserve Air Fleet (CRAF) pilots were reluctant to land in Saudi Arabia until they were provided chemical protection gear,²⁸ and third-country truck drivers, seeing the chemical protective gear with which U.S. soldiers were equipped, were reluctant to drive until they were provided gas masks. The United States should stockpile such equipment if it plans to make early use of ES personnel in the future. In Korea, if U.S. forces are to make effective use of KSC and KATUSA personnel (uniformed Koreans providing External Support in the forward area and in combat units, respectively), the United States must eliminate current shortfalls in stockpiles of individual equipment for these personnel.
- The United States must be prepared to pay for ES, as it did in the Gulf War. While it is appropriate to enter into negotiations with host countries about the

²⁸ James K. Matthews and Cora J. Holt, "So Many, So Much, So Far, So Fast: United States Transportation Command and Strategic Deployment for Operation Desert Shield/Desert Storm," Joint History Office, Office of the Chairman of the Joint Chiefs of Staff, 1996.

provision of WHNS, refusal to consider equitable cost sharing or to enter into contingency contracts that may involve full payment leads to ineffective use of ES and, potentially, to much greater long-term costs if ES assets must be replaced by U.S. uniformed personnel and U.S. equipment.

Existing DoD directives, the new CENTCOM regulation, the two Army regulations and, to a lesser degree, Air Force handbooks and other documents reflect a recognition of these facts. The two Army regulations on WHNS and LOGCAP provide direction and authority to make use of the full range of External Support possibilities.

Unfortunately, our research suggests that force planners throughout the Department of Defense, especially the Army staff and the staffs at CENTCOM and USFK, have not made adequate efforts to include External Support in their force planning.²⁹ There is ample evidence of this lack of effort: the absence of clear DoD-wide guidance, the absence of any WHNS or ES office in CENTCOM until recently; the failure to sign any new Technical Agreements in the 6 years since Secretary Cheney signed the U.S./ROK Umbrella Agreement; the failure in both theaters to enter into contingency contracts or to insert war clauses into peacetime contracts; the Air Force plan to replace Korean contractors with Air Force personnel on Main Operating Bases in Korea; and the failure of the Army force development process and of planners in 3d and 8th Armies to follow the Army regulations on Host Nation Support and LOGCAP.

Improving the plans for and use of External Support should allow the Department of Defense to make the most effective use of scarce resources as well as ensure its ability to move forces rapidly to distant locations and support them upon arrival. As we have shown with real examples in the Gulf War and in current plans in Korea, External Support can speed the delivery of combat forces, reduce the need for strategic lift, and provide an offset to U.S. military support forces in many cases.

ES should also be a part of Total Logistics Planning. Experience in the Gulf War demonstrated that local procurement of a wide range of supplies, from food to repair parts, was critical to U.S. success. In contrast to this real world experience, a recent IDA report³⁰ found that Army wartime logistic planning does not make adequate use of the potential for other nations to provide essential wartime supplies such as food (Class I), clothing (Class II), construction and barrier materials (Class IV), major equipment items such as trucks, aircraft, and cement mixers (Class VII), medical supplies (Class VIII), and

²⁹ We did not look at the Total Force planning conducted by other Services or other CINCs.

³⁰ Tillson, et al., IDA Paper P-3310.

repair parts (Class IX). The IDA report argued that, just as DoD plans to obtain POL products (Class III) from nearby producers, Service logistic planners should seek out and plan for using local producers to provide wartime logistic support.³¹

H. POTENTIAL NEXT STEPS

A decision to engage in true Total Force Planning might result in the following kinds of actions:

- A DoD directive (DoDD) on Total Force planning and the use of External Support might be written. This directive might contain approaches similar to those in DoDD 2010.8, DoD Policy for NATO Logistics, DoDD 1100.04 Guidance for Manpower Programs, DoDD 1100.18 Wartime Manpower Mobilization Planning, the Army regulations on WHNS and LOGCAP, and the CENTCOM Regulation 700-2 Outsourcing Logistical Support. This DoD directive might also address necessary changes in funding practices that hinder efficient procurement actions in a contingency.
- The *Defense Planning Guidance* might address the requirement for Total Force Planning and the use of External Support. It might also require a report on results of market surveys, and on the impact of WHNS agreements and contingency contracting in reducing the need for logistical support in the major planning scenarios as well as in lesser scenarios.
- The CINCs and their component commanders might make a more aggressive effort to obtain ES. They might direct their logistic planners to develop more realistic requirements for ES and they might engage their contracting commands more aggressively in contingency planning. Our analysis suggests that contingency contracting holds the greatest potential for

³¹ Expanded use of ES is also consistent with the conclusions of the *Quadrennial Defense Review* (QDR). The QDR addresses, as one of its major goals, the need to achieve a smaller and less costly defense infrastructure in the 21st century. As part of that goal, the QDR identifies the need to achieve efficiencies in operations in order to free up the resources needed for new investments. The QDR proposes that the Services "consider far more non-warfighting DoD support functions as candidates for outsourcing, inviting commercial companies to compete with the public sector to undertake certain support functions. DoD's experience with outsourcing thus far demonstrates that it can enjoy many of the benefits that private industry has gained from outsourcing—tighter focus on core tasks; better service quality; more responsiveness and agility; better access to new technologies; and lower costs." While not directive in nature itself, the QDR indicates that the Services are being directed to "Compete, outsource, or privatize military department infrastructure functions that are closely related to commercial enterprises."

This QDR language can be applied to wartime combat service support functions of the Military Services and is consistent with the possibilities identified in this paper. As the Gulf War demonstrated, most support functions, although performed in the wartime theater, look more like "commercial enterprise" than like warfighting functions. To the extent that these functions can be competed, outsourced, or privatized, the resources freed up can be devoted to other needs more directly related to warfighting.

providing ES of the magnitude and reliability necessary. They might change the nature of their peacetime contracting process in ways that would allow them more easily to use peacetime contracts as a base from which contractor support might be expanded in a contingency. The contracting effort might address the needs of each of the components for both services and supplies.

- USFK, CINCPAC, and OSD might make a more aggressive effort to resolve the outstanding U.S./ROK differences that are holding up progress in obtaining assured WHNS.
- The Army might follow up on the recommendations of the commander of the ARCENT Contracting Command in the Gulf War. For example, the Army might create contracting units assigned to the component commanders that would be responsible for pre-war development of contingency contracts.³² These units might have augmentation units in the Army Reserve component. They might create a contracting MOS for NCOs as the Air Force has.
- The potential for External Support to meet Joint needs, e.g., long-range communications, and those of the other Services might be investigated.

³² The Army has recently added two contracting officers to each division.

Appendix A

AUTHORITIES SUPPORTING THE USE OF FORMS OF EXTERNAL SUPPORT

There are no specific DoD policies addressing the concept of External Support nor is there an official DoD directive (DoDD) or other policy statement regarding WHNS or contingency contracting for South West Asia and Korea. There are several DoD directives that address ES indirectly.

DoDD 2010.8, DoD Policy for NATO Logistics, November 1986, establishes policies that appear appropriate for both of the MTW for which we currently plan.

With regard to Host Nation Support, the directive states, "U.S. forces assigned to NATO shall rely on host nation support for logistics functions, continuously ascertain host nations' willingness and capability to provide the required support, and attempt to formalize that support in written agreements. To ensure the flow of materiel to support deployed forces in emergency agreements, follow-on arrangements and joint planning for logistics lines of communication are of especially high priority. Some other areas of host nation support are to be addressed: collocated operating bases; reception, departure, and clearance services at ports of debarkation; enroute and transient support; overflight rights; weapons systems cross-servicing; support of naval vessels; intratheater transportation; terminal transfer services; supplies; troop support services; facilities; materiel handling; equipment decontamination services; communication services and equipment; medical services and equipment; and labor. The absence of written agreements does not prevent programming for Host Nation Support in anticipation of such agreements."

With regard to sharing of host nation transportation assets, the directive states, "Besides appropriate U.S. assets, DoD components shall rely on transportation assets committed to the various NATO wartime transportation pools, such as the NATO pool of merchant ships and cargo and passenger aircraft, in evaluating lift requirements for a NATO war. The availability of those assets shall be considered in planning, programming, and budgeting for U.S. transportation capabilities." With regard to the use of host nation petroleum distribution, handling, and storage assets, the directive states, "Within the limits of its allotted capacity, the United States shall rely on the Central

European Pipeline System (CEPS), operated by the Central European Operating Agency (CEOA), for storing and distributing bulk petroleum products in the central European region. DoD Components shall not program or obtain fuel storage or distribution facilities in the region if the CEPS is capable of satisfying the requirement. When the CEPS cannot meet requirements, the justification for alternative facilities must address provisions for interoperability with the CEPS."

DoDD 1100.04, Guidance for Manpower Programs, 1954, is still the basic directive addressing DoD manpower programs and makes two statements relevant to ES. With regard to personnel utilization, the directive states that "civilian personnel will be used in positions which do not require military incumbents..." and "indigenous personnel will be utilized to the maximum extent practicable consistent with security and the necessity of maintaining a high state of readiness."

DoDD 1100.18, Wartime Manpower Mobilization Planning, 1986, establishes two relevant policies: "use a mix of military and civilian manpower capable of satisfying mobilization or wartime demands," and "hire additional civilian employees or exercise contingency contracts to do essential work not requiring military-unique experience."

DoDI 3020.37, Continuation of Essential DoD Contractor Services During Crises, November 1990, directly addresses the concepts behind ES. This instruction establishes DoD policy that "DoD Components shall rely on the most effective mix of the Total Force, cost and other factors considered, including Active, Reserve, civilian, host-nation, and contract resources necessary to fulfill assigned peacetime and wartime missions." This instruction also states that "DoD components working with contractors performing essential services shall develop and implement plans and procedures which are intended to provide reasonable assurance of the continuation of essential services during crisis situations using contractor employees or other resources as necessary."

There are a number of Service and CINC policies and practices that are either general enough to apply to WHNS and contingency contracting in Korea and Southwest Asia or that specifically address these two areas.

Army Regulation 570-9, Host Nation Support, November 1990, describes WHNS in a manner consistent with the DoD definition. In its statement of purpose, chapter 1, the regulation says that the purpose of HNS is "to supplement or satisfy combat support and combat service support requirements overseas." In assigning responsibilities, Chapter 4,

the regulation directs the Deputy Chief of Staff for Operations and Plans to "include WHNS considerations in Army doctrine development education and training, planning and programming, and the force development process."

In Chapter 5, Policy, the regulation states that "WHNS can provide certain CS and CSS functions for forward-deployed and deploying U.S. Army forces that can speed reception and reinforcement, enhance operational flexibility, and increase force sustainability." With regard to the relationship between WHNS and U.S. Army force structure, the regulation states, in 5 d.:

"WHNS is considered to be reasonably assured upon the conclusion of a formal WHNS agreement between the governments of the United States and the host nation.

(1) Actual adjustments to existing U.S. Army force structure and to deployment plans are based only on reasonably assured WHNS. These adjustments must be directly related to the actual details of WHNS agreements and plans that define all specific tasks, priorities, and procedures for validation.

(2) For planning and programming beyond the current force, offsets to the U.S. Army force structure will be based upon projected U.S. Army force shortfalls and coordinated DA and JCS estimates of future WHNS potential to satisfy these shortfalls." This Army policy statement states that WHNS can be used to offset the demand for U.S. forces and then suggests that the offset will be only to projected force shortfalls, i.e., Compo 4 forces.

The Army regulation establishes a policy for payment for WHNS, Chapter 5 g: "WHNS may be obtained on a reimbursable basis when other negotiation options are not feasible. Reimbursements or other compensation may be obtained as quid pro quo, a part of mutual defense programs, or through combined defense projects. The form of reimbursement or compensation will be specified in the agreements."

Army Regulation 700-137, Logistics Civil Augmentation Program (LOGCAP), December 1985, describes the Army program for using civilian contractors to perform services in wartime to augment Army forces. In its statement of purpose, chapter 1-1, the regulation identifies "specific advanced acquisition planning objectives: a. Resolve the combat support and combat service support unit shortfalls represented in operations plans (OPLANS) and in the Army program. b. Consider conversion of existing support units based upon availability of contract support in wartime. c. Provide rapid contracting capability for contingencies not covered by global OPLANS."

In its statement of policy, chapter 2-1, the regulation states, "The Army continually seeks to increase its combat potential within peacetime resource allocations. To achieve the maximum combat potential, maximum support from as many sources as possible is necessary. This requires pursuit of support from external resources. Host Nation Support (HNS) is one method of support negotiated through Government to Government agreements. LOGCAP is aimed at providing another support alternative by capitalizing on the civilian sector in CONUS and overseas locations." AR 700-137 goes on to say:

Chapter 2-4, *Risk*. "The use of civilian contractors versus U.S. military personnel involves a higher degree of risk. Contractor employees have supported the Army in overseas location during previous crises and can provide continued support in the future.... Advanced acquisition planning can reduce the risk of providing redundancy and multiplicity of sources of support."

Chapter 2-6, *Force Structure Adjustments*. "For current and outyear planning and programming, offsets to the force structure will be based on awarded contingency contracts and contingency clauses included in peacetime contracts."

Chapter 3-1, *Procedures*. "Commanders must evaluate the most effective use of contractors. In some critical situations and locations, contractor support may not be suitable....Geographic MACOMS (i.e. 3d Army for CENTCOM and 8th Army for USFK) must determine what form of LOGCAP is most appropriate for the specific theater."

Chapter 3-6, *Procedures for Regions with Host Nation Support*. "LOGCAP must be viewed as a means to ensure continued wartime performance of critical peacetime contracts negotiated with host nation firms and, in addition to existing host nation support, to provide expanded wartime support from the host nation civil sector."

In identifying specific responsibilities, the regulation directs the Deputy Chief of Staff for Operations and Plans (the person who manages the TAA process) to "ensure that force structure is properly adjusted to reflect contingency contracts actually awarded and contingency clauses actually included in peacetime contracts." The regulation also directs other functional staff officers such as the Chief of Engineers and the Surgeon General to include LOGCAP considerations in their long-term force planning.

The Air Force has a set of handbooks addressing contingency contracting but apparently has neither handbooks nor regulations concerning Host Nation Support. The contingency contracting handbooks describe contingency contracting as providing a full range of services from food service and refuse collection to large-scale construction.

Although both the Army and CINCPAC regulations/instructions state that contingency contracting is not to replace Host Nation Support, Air Force documents on contingency contracting do not address this relationship and only suggest that contingency contracts will precede WHNS and may be replaced by WHNS. A search of Air Force Doctrine Documents for Base Support Planning and Civil Engineering Contingency Response Planning fails to reveal a mention of Host Nation Support. The Logistics Doctrine Document defines Host Nation Support as a logistic concept but provides no policy guidance. None of these documents suggest any relationship between any form of ES and Air Force force structure.

USFK Regulation 550-52, Wartime Host Nation Support Program, 1995, describes a WSFK WHNS program that is "based on the Umbrella Agreement" and is designed to "enhance the warfighting capabilities of U.S. forces." The USFK regulation states that "WHNS helps fill some critical shortages until U.S. CS and CSS units arrive and is not intended to replace U.S. units on the TPFDL." The USFK Regulation makes no provisions for future force planning and does not address those aspects of WHNS such as civilian employees, KATUSA, facilities, and communications that do not have equivalent Army units on the TPFDL.

The USFK regulation describes contracting and contingency contracting and states that such contracts, "directly reduce the number of support personnel and volume of materiel competing for strategic airlift."

The U.S. Pacific Command has a regulation addressing WHNS that says essentially the same thing as the USFK regulation. It also has an instruction addressing contingency contracting, USCINCPAC Instruction 4230.1c, April 1996. This instruction calls for a joint service contingency contracting effort designed to "bridge the gap between what is available in the military logistics system and what the units need. ... Contingency contracting will not replace the available logistics or the HNS system. Units are required to use these systems before contracting is authorized to purchase the item or service."

CENTCOM has a regulation, 700-2, "Outsourcing Logistical Support: Host Nation Support, Other Nation Support, Contracting and Civil Augmentation Programs," June 1997, that specifically "establishes policy guidance and area responsibility for outsourcing logistical support to U.S. forces operating in USCENTCOM's Area of Responsibility." The regulation is the only one we have found that addresses all forms of

ES in a coherent manner.¹ It directs that the Service components “programmatically and deliberately plan the integration of outsourcing options to satisfy internal military logistical supply and service shortfalls.” An appendix to the regulation lists the potential logistics supplies and services including all classes of supply except for ammunition and virtually all CSS type of services from construction, to medical, to security, to transportation.

¹ It even addresses a concept called “Other Nation Support” as well as the Air Force and Navy versions of the better known Army LOGCAP program.

Appendix B

POTENTIAL LEVELS OF EXTERNAL SUPPORT

Counting rules for selecting units:

1. Was this function performed by ES in the Gulf War?
2. Is this function currently performed in support of U.S. forces in peacetime?
3. Is this function scheduled to be performed by WHNS or other forms of ES in support of U.S. contingency plans?
4. Is this function included in the LOGCAP statement of work?
5. No command and control headquarters.
6. Postal companies but no personnel units or replacement units.
7. No civil affairs units as they will be needed for working with the host nation.
8. Protect engineer command and control, technical units, and combat and corps level combat heavy battalions.
9. Protect LG units as they appear to be management.
10. Protect medical units in Korea but convert 6 hospitals in Japan to account for the agreement to use 3000 Japanese hospital beds.
11. MP combat support, guard, and POW units.
12. General support ammunition, maintenance, and quartermaster units but no specialized ammunition units.
13. General support, long haul, EAC signal units.
14. All general support transportation units in support of the Army and of other services but no specialized units such as HETs.

Candidate Units For External Support In Northeast Asia (Page 1 of 5)

Type of Unit	Number of Soldiers per Unit	Number of Units	Total Number of Soldiers
HQ MODULAR POSTAL CO	5	14	70
HQ MODULAR POSTAL CO	5	6	30
HQ MODULAR POSTAL CO	5	3	15
PLT MODULAR POSTAL (SVCS)	18	36	648
PLT MODULAR POSTAL (SVCS)	18	15	270
PLT MODULAR POSTAL (OPNS)	18	6	108
PLT MODULAR POSTAL (OPNS)	18	2	36
PLT MODULAR POSTAL (OPNS)	18	9	162
CO FORCE PROVIDER	439	3	1317
TM ARID WATERAUG	25	4	100
TM ARID WATER AUG	18	1	18
TM ARID WATER AUG	5	1	5
DET TAACOM HQ R TOC	25	1	25
CO CONSTRUCTION SUPPORT	172	2	344
BN COMBAT HEAVY (EAC)	652	9	5868
CO CBT SUPPORT EQUIPMENT	178	11	1958
CO DUMP TRUCK	80	2	160
CO PIPELINE CO NST SPT	166	1	166
CO LT EQUIP (LT)	173	2	346
CO MEDIUM GIRDER BRIDGE	109	5	545
CO ASSAULT FLOAT BRIDGE	179	6	1074
TM BN HQ (EAC)	36	3	108
PLT FIREFIGHTING (CBTZONE)	4	3	12
PLT FIREFIGHTING (CBTZONE)	4	8	32
PLT FIREFIGHTING (COMMZ)	4	43	172
TM FIREFIGHTING (FIRE TRK)	6	21	126
TM FIREFIGHTING (FIRE TRK)	6	94	564
TM FIREFIGHTING (WATER TRK)	2	10	20
TM FIREFIGHTING (WATER TRK)	2	21	42
TM FIREFIGHTING (WATER TRK)	2	112	224
TM FIREFIGHTING (BRUSH TRK)	2	5	10
TM FIREFIGHTING (BRUSH TRK)	2	6	12
TM FIREFIGHT (CRASH/RESCUE)	3	3	9
TM QUARRY 75 TPH	38	7	266
TM DIVING (CON & SPT)	13	1	13
TM DIVING (LTWGT)	17	3	51
DET REAL ESTATE	15	1	15
TM UTILITIES (4000)	60	2	120
TM UTILITIES (4000)	60	8	480
TM TOPO PLAN/CONTROL	11	1	11
DET TERRAIN (HVY DIV)	6	3	18
DET TERRAIN (DS/CMD CTL)	2	4	8
DET TERRAIN (LTDIV)	8	3	24
CO PORT CONSTRUCTION	201	1	201

Candidate Units For External Support In Northeast Asia (Page 2 of 5)

Type of Unit	Number of Soldiers per Unit	Number of Units	Total Number of Soldiers
HHC TOPO EN BN(EAC)	76	1	76
CO TOPOGRAPHIC(EAC)	116	1	116
CO TOPOGRAPHIC(CORPS)	113	2	226
CO PRIME POWER	102	1	102
BN COMBAT HEAVY (EAC)	652	1	652
UNIT HOSP CBT SPT (296BD)	604	3	1812
UNIT HOSPITAL FIELD (504 BD)	428	3	1284
DET CID (HVY DSE)	11	3	33
DET CID (LTDSE)	9	2	18
CO CBT SPT	177	4	708
CO CBT SPT	177	27	4779
CO CBT SPT	177	2	354
SQD EPW/CI PROCESSING	9	7	63
DET EPW/CI COMMAND LIAISON	11	1	11
TM CAMP ADV (PW)	13	4	52
DET EPW/CI COMMAND & CONTROL	37	1	37
TM PROCESSING LIAISON	6	4	24
DET PW INFO CENTER	60	1	60
CO ESCORT GUARD	145	1	145
CO GUARD	124	6	744
CO COMBAT SUPPORT	177	1	177
CO COMBAT SUPPORT	177	5	885
CO COMBAT SUPPORT	177	14	2478
CO COMBAT SUPPORT	177	2	354
CO MAINT NON DIV (DS)	200	1	200
CO MAINT NON-DIV (DS)	200	27	5400
CO MAINT NON-DIV (DS)	200	10	2000
TM ENG EQUIP REPAIR	9	18	162
TM ENG EQUIP REPAIR	9	10	90
TM WHEEL VEH REPAIR	7	40	280
PLT TRACK REPAIR (GS)	36	9	324
PLT WHEEL VEH REPAIR(GS)	37	45	1665
PLT CONSTR EQUIP REPAIR (GS)	36	6	216
PLT ARMAMENT EQ REPAIR (GS)	37	3	111
PLT POWER GEN REPAIR(GS)	36	15	540
PLT QM/CHEM EQ REPAIR(GS)	36	19	684
PLT SIG COMMO REPAIR(GS)	40	6	240
CO GS MAINTENANCE	73	21	1533
CO SVC (COLL & CLASS)	127	3	381
CO AMMO GS/CSAMOADS/PLS	217	1	217
CO AMMO CONVLDS(MOADS/PLS	173	5	865
CO AMMO GS/CSAMOADS/PLS	217	2	434
CO AMMO GS/TSAMOADS/PLS	259	1	259
TM BSTF (AUG)DS	5	6	30

Candidate Units For External Support In Northeast Asia (Page 3 of 5)

Type of Unit		Number of Soldiers per Unit	Number of Units	Total Number of Soldiers
TM	BSTF (AUG)DS	5	11	55
CO	AMMO CLT	16	2	32
CO	AMMO CLT	16	2	32
CO	AMMO CLT	16	1	16
CO	AMMO CLT	16	1	16
CO	PETROL PIPE/TERMLOPER	171	7	1197
CO	PETROLEUM SUPPLY	202	7	1414
CO	PETROLEUM SUPPLY	202	37	7474
CO	WATER SUPPLY	150	1	150
CO	WATER SUPPLY	150	1	150
DET	WATER PURIFICATION	57	2	114
CO	MORTUARY AFFAIRS	209	1	209
CO	CORPS COLLECTION	212	2	424
DET	AIRDROP SUPPORT	77	1	77
TM	LAUNDRY SERVICE	11	12	132
TM	PETROLEUM LIAISON	15	3	45
TM	AOAP MOB LAB	9	1	9
TM	WATER PURIFICATION	15	1	15
TM	TACT WATER DIST SYS	19	1	19
CO	LAUNDRY AND RENOVATION	148	6	888
CO	FIELD SERVICE	108	11	1188
CO	FIELD SERVICE	108	5	540
CO	GENERAL SUPPLY	142	3	426
CO	GENERAL SUPPLY	142	3	426
CO	REPAIR PARTS SUPPLY	185	2	370
CO	REPAIR PARTS SUPPLY	185	1	185
CO	HEAVY MATERIEL SUPPLY	162	2	324
CO	HEAVY MATERIEL SUPPLY	196	1	196
CO	SUPPLY (DS)	143	7	1001
CO	SUPPLY (DS)	143	5	715
DET	LID SPT	17	1	17
PLT	PERISHABLE SUBSISTENCE	56	4	224
PLT	PERISHABLE SUBSISTENCE	56	2	112
PLT	MAP DISTRIBUTION	22	2	44
PLT	MAP DISTRIBUTION	22	2	44
DET	AVN REPAIR PARTS AUG	53	2	106
CO	WATER SUPPLY	150	1	150
DET	WATER PURIFICATION	57	2	114
TM	WATER PURIFICATION	15	5	75
CO	GENERAL SUPPLY	142	1	142

Candidate Units For External Support In Northeast Asia (Page 4 of 5)

Type of Unit	Number of Soldiers per Unit	Number of Units	Total Number of Soldiers
CO SUPPLY (DS)	143	6	858
PLT PERISHABLE SUBSISTENCE	56	1	56
CO PETROLEUM SUPPLY	202	3	606
TM TACT WATER DIST SYS	19	1	19
CO SUPPLY (DS)	143	2	286
PLT PERISHABLE SUBSISTENCE	56	1	56
BN CORPS AREA (MSE) (ABN)	698	1	698
CO TRITAC CONTINGENCY	159	2	318
BN CORPS SUPPORT (MSE)	488	3	1464
CO MODULAR SIGNAL	7	12	84
TM REPRO SERVICES	8	5	40
CO TACSAT CO	89	1	89
CO POWER PAC3	155	3	465
CO EAC COMBAT CAMERA	78	1	78
CO CABLE-WIRE CO	256	5	1280
BN EAC AREA (3NODETRITAC)	507	5	2535
CO TROPO (LIGHT)	162	1	162
CO TROPO (HEAVY)	60	3	180
CO CMD OPNS (THEATER)	178	1	178
BN AADCOM SPT	953	1	953
CO ADA SUPPORT	125	3	375
BN CONTINGENCY SPT	592	1	592
BN SIGNAL (ABN) (SPEC OPS)	278	1	278
CO FLOATING CRAFT	384	3	1152
TM LIGHTER AMPHIB (LARCLX)	51	2	102
DET LOGISTICS SPT VESSEL	29	6	174
DET TRAILER TRANSFER POINT	16	4	64
DET TRAILER TRANSFER POINT	16	8	128
TM TERMINAL SVC (CARGO DOC	8	12	96
TM FREIGHT CONSOL & DISTRI	11	2	22
TM FREIGHT CONSOL & DISTRI	11	3	33
TM CONTRACT SUPERVISION	12	3	36
TM AUTO CARGO DOC (PORTS)	30	3	90
TM MVMT CTRL (A TEAM)	3	18	54
TM MVMT CTRL (A TEAM)	3	9	27
TM MVMT CTRL (B TEAM)	6	16	96
TM MVMT CTRL (B TEAM)	6	7	42
TM MVMT CTRL (C TEAM)	8	5	40
TM MVMT CTRL (C TEAM)	8	6	48
TM MVMT CTRL (C TEAM)	8	4	32
TM MVMT CTRL (C TEAM)	8	6	48
TM MVMT CTRL (C TEAM)	8	15	120
TM MVMT CTRL (D TEAM)	14	3	42
TM MVMT CTRL (D TEAM)	14	4	56
TM MVMT CTRL (HWY REG PT)	5	14	70
AGCY MOVEMENT CONTROL (THTR)	79	1	79
CTR MOVEMENT CONTROL (CORPS)	44	2	88
CO FLOATING CRAFT MAINT GS	215	2	430

Candidate Units For External Support In Northeast Asia (Page 5 of 5)

Type of Unit	Number of Soldiers per Unit	Number of Units	Total Number of Soldiers
CO LIGHT/MEDIUM TRUCK	167	4	668
CO LIGHT/MEDIUM TRUCK	167	5	835
CO LIGHT/MEDIUM TRUCK	167	5	835
CO MEDIUM TRK (CARGO) (40 FT)	175	9	1575
CO MEDIUM TRK (WATER) (40 FT)	175	1	175
CO MEDIUM TRK (CARGO) (CORP)	191	5	955
CO MEDIUM TRK (WATER) (CORP)	191	3	573
CO MEDIUM TRK (POL) (5000 GA)	177	7	1239
CO MEDIUM TRU K PLS	160	6	960
CO CARGO TRANSFER	267	4	1068
CO HEAVY BOAT	155	2	310
TM PORT CARGO OPNS	96	4	384
TM MVMT CTRL (AIR TERMINAL)	37	4	148
CO CARGO TRANSFER	267	3	801
CO MEDIUM TRK (POL) (7500 GAL)	177	7	1239
CO CARGO TRANSFER	267	2	534
CO MEDIUM BOAT	173	1	173
CO TRAIN OPERATING	157	1	157
CO RAIL EQUIP MAINT	107	2	214
CO RAILWAY ENGR (MTOF WAY)	184	1	184
CO LIGHT/MEDIUM TRUCK	167	1	167
CO MEDIUM TRK (CARGO) (CORP)	191	4	764
CO MEDIUM TRK (POL) (5000GA)	177	5	885
TM TERMINAL SVC (CARGO DOC	8	1	8
CO MEDIUM TRK (CARGO) (40 FT)	175	3	525
CO MEDIUM TRK (POL) (7500G AL)	177	6	1062
DET LOGISTICS SPT VESSEL	29	2	58
CO CARGO TRANSFER	267	1	267
Total Number of Soldiers			95,718

**Candidate Units for External Support in Southwest Asia
in Addition to Gulf War Equivalent Units**

Type Unit	No. of Soldiers	No. of Units	Total Soldiers
CTR MATERIEL MGMT (COSCOM)	384	1	384
CTR MATERIEL MGMT (TAACOM)	363	1	363
BN AREA SUPPORT	355	3	1,065
BN AREA SUPPORT	355	3	1,065
BN LOG (FWD)	223	1	223
BN LOG (REAR)	347	1	347
BN LOGISTICS (FORWARD)	223	2	446
BN LOGISTICS (REAR)	347	1	347
BN EPW/CI (4000)	148	12	1,776
CO COMBAT SUPPORT	177	19	3,363
CO COMBAT SUPPORT	177	2	354
CO COMBAT SUPPORT	177	2	354
CO COMBAT SUPPORT	177	18	3,186
CO COMBAT SUPPORT	177	3	531
CO ESCORT GUARD	145	2	290
CO GUARD	124	26	3,224
CO GENERAL SUPPLY	142	1	142
CO GENERAL SUPPLY	142	5	710
CO HEAVY MATERIEL SUPPLY	196	1	196
CO HEAVY MATERIEL SUPPLY	162	1	162
Total Number of Soldiers			18,954

Appendix C

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Appendix D

GLOSSARY

AFCAP	Air Force Contract Augmentation Program
AR	Army Regulation
ARCENT	Army Headquarters Component, U.S. Central Command
CCK	Contracting Command Korea
CENTCOM	Central Command
CEOA	Central European Operating Agency
CEPS	Central European Pipeline System
CINCPAC	Commander-in-Chief Pacific
CONCAP	Navy Emergency Construction Capabilities Contract
CONUS	Continental United States
CRAF	Civil Reserve Air Fleet
CS	Combat Support
CSS	Combat Service Support
DFSC	Defense Fuel Supply Center
DoD	Department of Defense
DoDD	Department of Defense Directive
EAC	Echelons Above Corps
ES	External Support
HNS	Host Nation Support
IDA	Institute for Defense Analyses
KATUSA	Korean Soldiers Augmenting U.S. Army Units
LMSR	Large Medium Speed Ro Ro
LOGCAP	Logistics Civil Augmentation Program (Army)
MOS	Military Occupational Specialty
MRE	Meal Ready to Eat
MTOE	Modified Table of Organization and Equipment
MTW	Major Theater War
NATO	North Atlantic Treaty Organization
NCO	Noncommissioned Officer

NEPB	National Emergency Planning Board
OSD	Office of the Secretary of Defense
PGW	Persian Gulf War
POL	Petroleum
QDR	Quadrennial Defense Review
ROK	Republic of Korea
ROKG	Republic of Korea Government
TAA	Total Army Analysis
TDA	Table of Distribution and Allowances
TOE	Table of Organization and Equipment
TPFDL	Time Phased Force Deployment List
USFK	U.S. Forces Korea
VISA	Voluntary Intermodal Sealift Agreement
WHNS	Wartime Host Nation Support
WRSA	War Reserve Stocks for Allies

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