CHAPTER 2
OPERATIONAL CONSIDERATIONS

INTRODUCTION

The end of the cold war, operations Desert Shield/Storm, and Somalia have left us facing a different enemy, different threats, and changing missions. To perform these new missions and counter threats, the logistician must plan for more frequent deployments of relatively short duration. These deployments will be to undeveloped theaters anywhere in the world. Therefore, the logistics support structure must be prepared to support task-force-sized elements during deployment and immediately upon arrival into the area of operations (AO). It must then sustain the forces until they are redeployed. These tasks will not negate our responsibility to provide support to nondeploying customers.

QMC SUPPORT OF NATIONAL MILITARY STRATEGY

The foundation of our national military strategy is the national security. The four basic demands fulfilled by the military that must be logistically supported are the following:

- Ensuring strategic deterrence and defense.
- Exercising forward presence in vital areas of the world.
- Responding effectively to a crisis.
- Retaining the capacity to reconstitute forces.

It is the Army's ability to react promptly and conduct sustained land battle that makes it decisive. To the QMC this means ensuring logistics reaches the hands of the war-fighter on time and in the right quantities to support and sustain operations. Support of the war-fighter's mission on a moment's notice, anywhere in the world, is woven into the fiber of the QMC.

The QMC must remain capable of full-dimensional operations. Quartermasters must think war and employ all available means to complete any given mission across the range of military operations. Support should be effective and efficient.

Supply and field services units must train as part of a joint, combined, United Nations, or interagency force. Logistics plans must mesh with the tactical commander's plans and his intent. This ensures timely logistical support and sustained operations.

Logistics commanders and planners must tailor support packages to theater requirements for a variety of strategic contingency plans. This capability will be enhanced through the planned modularity of logistics units. Modular units, coupled with pre-positioned supplies and equipment on land and at sea, will ease the burden on strategic lift requirements.

The keys to ensuring QM units are expansible are trained and ready active and reserve component units that can respond to support any crisis in the world. Timely mobilization of QM forces will allow the effective and efficient support of US forces in war and operations other than war.

The changing mission of the Army calls for highly mobile, multifunctional organizations capable of projecting logistics power anywhere in the world. Success is measured in the ability of combat service support elements to project a logistics structure that will effectively and efficiently sustain maneuver forces in a wide variety of mission profiles anywhere in the world.

FORCE PROJECTION CONSIDERATIONS

Force projection is the demonstrated ability to quickly alert, mobilize, deploy, and operate anywhere in the world. Operations Just Cause and Desert Shield/Storm dramatized the ability of QM

units to synchronize assets at all levels of war and respond rapidly to a force projection crisis.

Successful force projection requires tailorable, flexible QM units. The nature and size of a logistical projection depends on the size of the deploying task force to be supported, maturity of the theater of operations, availability of in-theater stocks, and the host-nation support structure. The existing infrastructure will greatly affect supply and field service planning. Road networks and capacities, seaports, inland waterways, climatic conditions, and the availability of airfields, utilities, buildings, construction capabilities, and raw resources will affect the types of supply and field service units required to support operations. Infrastructure in the area of operations will also affect unit and supply sequencing. A detailed discussion of logistics preparation of the theater is found in Chapter 5.

Consideration of infrastructure and unit requirements is important. The development of forward logistics bases, intermediate staging areas, and lodgments in a theater may be required. The theater may have full port facilities (air and sea); or it may require over-the-shore or austere air flow operations. Additionally, the supply and field service planner must consider contract supplies and field services (if available) as a means to augment and assist military capabilities. This is critical during the initial phases of an operation.

The intent and purpose of force projection requires that logistics commanders deploy only those forces necessary to support the task force. Logistics commanders and planners must tailor units to meet the task force requirements. Only personnel, equipment, and supplies required to support the mission should be deployed.

The Army is becoming smaller and more CONUS-based. Therefore, logistics planners must consider split-based logistical operations in supporting deployments. Split logistical operations will reduce deployment flow requirements and supply stockage build-up in the area of operations. However, they rely heavily on assured communications systems to be effective. These systems will allow support of both nondeployed and deployed forces for short duration deployments. The nondeployed logistics base would receive and act on requirements from forward deployed elements, pushing required supplies to the forward deployed unit's area of operations. As the theater develops (for longer duration deployments), the forward deployed element becomes the nucleus for follow-on supply and field service elements.

Besides supporting task force deployments and combat operations, the logistics planner must plan for and execute post-conflict support. Supply and field service units should plan to be among the first into an area of operation and the last to redeploy. This is primarily due to the need for supplies and field services support before, during, and after operations.

Force projection operations will challenge logistics leaders at all levels. Force projection requires early critical analysis of the tactical commander's intent and the threat. Analyses will be required at every level of logistics--strategic, operational, and tactical--and in operations other than war. The keys are anticipation of requirements and the synchronization of supplies and field services to the tactical commander's mission.

To anticipate requirements, the supply and field service planner must fully understand the commander's intent. He must also know the location of supported units, maintain total asset visibility before and throughout the operation, and maintain a continuous intelligence picture of the area of operations.

TACTICAL LOGISTICS FUNCTIONS

The changing mission of the Army requires highly mobile multifunctional organizations that can project logistics power anywhere in the world. Success is measured in the ability of combat service support elements to project a logistics structure that will successfully support the force anywhere in the world. The tactical logistics functions are manning, arming, fueling, fixing,

moving, and sustaining soldiers and their systems. The QMC plays a role in each of these, with primary responsibilities for fueling and sustaining soldiers and their systems. The logistics characteristics that apply to these areas are anticipation, integration, continuity, responsiveness, and improvisation. The tactical logistics functions are discussed, from a QM standpoint, below.

Manning

QM units depend on the manning function for the maintenance of their strength levels. The field service function of mortuary affairs, through the recovery and initial identification of soldiers killed in operations, supports the manning function. Information collected during mortuary affairs operations feeds both the casualty notification system and the personnel replacement system. Chapter 18 discusses mortuary affairs.

Arming

The QMC provides the organizational structure and support, at brigade level, for operating the ammunition transfer point (ATP). The ATP provides ammunition support for maneuver units. Logisticians must anticipate the space and road and rail requirements needed to handle350 to 500 short tons of ammunition daily. Logisticians must consider the gravity of having 20 to 50 semitrailers of ammunition without direct means of moving these supplies. Transferring these supplies quickly to prevent giving the enemy a target of opportunity is paramount.

Fueling

Changing technology--coupled with plans for increased mobility, modularity of units, and a single fuel Army--will enhance performance in providing fuel to the force. Even with these enhancements, fueling the force will be a major undertaking. Improved combat systems with greater range and fuel consumption will pose a challenge for logistics planners. Logistics planners must anticipate fuel needs and forecast requirements, developing a delivery system that will assure continuous flow of support forward. The system developed must be flexible enough to allow the continuous flow of fuel forward to maneuver elements even if a section of the system is destroyed or cut off. Chapter 11 discusses the fueling function.

Fixing

The successful maintenance and repair of soldiers' systems relates directly to the ability of QM personnel to provide the proper repair parts. The key to success is a rapid and continuous flow of supplies forward. An effective repair parts supply system requires diligent planning by personnel at all levels. This is especially true in force projection operations. Logistics planners, at the outset of deployment notification, must correctly identify and move only mission essential parts having anticipated demands. The distribution system must allow total asset and in-transit visibility. This will greatly enhance capabilities and will mean fewer stockpiles of parts in a theater of operations. In short, anticipation of need, coupled with improvements in distribution systems and implementation of new technologies, will enhance the maintenance posture of combat forces. Chapter 14 discusses repair parts supply.

Moving

QM units must move rapidly with enough supplies to support the mission. Mission requirements frequently require the timely concentration of units and supplies. The linchpin in providing information on movement of supplies and equipment is the automation systems that provide in-transit visibility. The supply and movement functions are inexorably tied together. Airdrop (a field service function) supports the movement function by moving personnel, supplies, and equipment--from an aircraft to the ground via parachutes. Chapter 17 discusses airdrop.

Sustaining Soldiers and Their Systems

There are five elements involved in sustaining soldiers and their systems. These are personnel

services, health services, field services, quality of life, and general supply. Of these, the QMC is directly responsible for field services, quality of life, and general supply.

Field services. Field service functions include airdrop, mortuary affairs, field feeding, laundry and shower, clothing and light textile repair, and water purification. They serve to keep soldiers' morale high and lead to enhanced effectiveness and mission success.

Quality of life. Quality of life is a command responsibility. Both the soldier and his family must be considered. With the streamlining of US forces, support troops may spend longer periods of time deployed away from home bases. It is incumbent on QM commanders to ensure that equitable opportunity exists for QM soldiers to share in morale, welfare, and recreational support activities; rest and recuperation operations; tactical field exchanges; and any other benefits being offered in a theater of operations. It is also incumbent on the commander to ensure that a soldier's family receives the proper care and attention during the sponsor's absence. This will have a direct correlation on the soldier's ability to perform his or her primary mission.

General supplies. Providing items to equip, maintain, and support the force is a primary mission of the QMC. How well the logistician requests, receives, procures, produces, stores, and moves supplies could decide the success of future operations. They will, for the most part, be done with longer lines of communication and with fewer personnel deployed. The success of supply operations will therefore hinge on timely and correct anticipation of maneuver force requirements coupled with a high speed transportation system, Use of initiative and agility by the logistician in support of the maneuver force is critical.

PROTECTION

Protection is not listed as a tactical logistics function. However, it is critical to QM units that must protect themselves during movements and when providing support. Protection of fuel, ammunition, and general supplies needed to support operations is important. As modular elements of QM units deploy, instead of full units, self-protection becomes more difficult. A greater reliance on the maneuver elements to assist in protection will be required. Therefore, QM unit commanders must coordinate with their supported tactical commanders while developing their own protection plan. Additionally, requirements will exist for protection of logistical facilities during OOTW. The best form of protection in these situations comes from an awareness and anticipation of the unexpected. Logistics leaders must consistently assess vulnerabilities of the organization and apply defensive tactics within constraints of mission accomplishment. Logistics leaders at all levels must see that--

- Personnel are properly trained and NCOICs are briefed on routes, contingencies, and defensive measures.
- Defensive plans consider not only tactical measures but also mission support.
-]Logistics soldiers fully understand the unit's concept of defense.

RECONSTITUTION OPERATIONS

Strategic-level reconstitution refers to those functions 'and activities required to restore the Army's ability to respond to any mission. It involves the industrial and mobilization base of the nation. The Army's strategic reconstitution hinges on integration of national efforts to restore a capability to mobilize, deploy, and conduct future operations. At the operational and tactical levels, reconstitution refers to the reorganization and regeneration of units to restore mission capability.

Reorganization

Reorganization is the regaining of mission capability by a unit through the internal realignment and cross-leveling of personnel, supplies, and equipment. The result is a unit capable

of performing its mission, even though it may be smaller and less than 100 percent mission capable.

Regeneration

Conversely, regeneration of combat forces is METT-T dependent and logistics intensive. It requires careful planning and execution. Because it is so logistics intensive, it should be planned for in advance. It should be administered by a commander, having control of the required resources, at least two levels above the force being regenerated. The identification of likely candidates is difficult. However, the general requirements and possible site location can be determined. Logistics planning considerations for regeneration include: rail and road networks, equipment requirements, supply replenishment, transportation, medical, maintenance, decontamination, and training. Regeneration will require a maneuver force to disengage and move to the regeneration site to be brought back to some level of readiness. Usually a 15 percent increase in readiness can be achieved. Regeneration requires time, especially for training and development of unit cohesion.

Weapons Systems Replacement

Weapons systems replacement using a linkup of personnel in the division or brigade support area is an efficient and effective method of reviving the force. In this method, systems are pushed to logistic support areas and crews are identified prior to issue to maneuver forces. This method uses less logistics structure and is less intensive than regeneration. And, the maneuver force does not have to disengage from its combat mission. Equipment, however, must be fully reprocessed and weapon systems bore sighted in the theater rear before shipment forward.

THREAT

The collapse of the Soviet Union has changed but not ended the threat. The main danger is now the resurgence of hard-line politics in any of the former soviet republics trying to revive its former power. Economic chaos has added to the threat imposed by the former soviet republics, as they sell weapons and technology worldwide to stabilize their economies. Also, their involvement in ethnic conflicts outside the former Soviet Union under the guise of ethnic solidarity poses a threat.

The threat environment has changed because of the collapse of the Soviet Union and the end of the cold war. This has made the world a more unstable place since the former Soviet Union suppressed many regional conflicts that are now emerging. Possible conflict areas which now threaten US and allied interests are global. They span countries and regions such as Korea, Kurdistan, the Balkans, the Andean Ridge, the Persian Gulf, and Palestine. The possible conflicts range from nuclear war to major regional conflicts to insurgences and terrorism. Plausible threats are now so varied that scenarios developed for planning purposes are inadequate. This new environment also includes the impact of global news networks that provide near-real-time reporting. This enhances the ability of threat governments to use the media as a tool of warfare.

A lesson learned from the Gulf War is that US technology must be equal to or greater than that of any opponent. As nations modernize they generally follow one of three paths in force development:

- A large force that employs run-of-the-mill technology.
- A small force employing high technology.
- A large force with a few high technology features.

Without the pressure of a superpower rivalry and with the erosion of imposed restrictions, high technology weaponry is being proliferated at a tremendous rate. Although few nations can afford to modernize their entire force, most can afford to purchase some advanced weaponry. Weapons of particular concern are theater ballistic missiles and weapons of mass destruction (nuclear, biological, and chemical). An enemy can use these to deny US forces the time to build up strength.

One can assume that potential enemies have studied US performance and tactics during operations Desert Shield/Storm and are developing ways to counter the strengths displayed. Tactics that the enemy will be likely to employ to counter US forces include--

- Preventing the buildup of US and allied forces. They might try to do this by deploying their attack forces into a theater to prevent the buildup of our heavy forces and by attacking our rear echelon infrastructure.
- Slowing the operational tempo of US forces. They might do this by improving their armor and antiarmor capabilities, degrading US battlefield identification capabilities, and maximizing use of land mines.
- Degrading the relative advantage of our command, control, communication, and intelligence (C^3I) capabilities. They might achieve this by using electronic countermeasures and stealth or low-observation materials and technologies.
- Maximizing US casualties through use of guerrilla attacks and biological and chemical agents.

Since a threat of war still exists anywhere on the globe, the quartermaster must be prepared to support the' 'next" battle. To do this successfully requires training of our soldiers in defensive and offensive tactics in a variety of situations and environments, planning, anticipation, and a thorough understanding of the maneuver commander's objectives and tactics. These, coupled with flexibility and vision, will ensure that supplies and field services are applied on time and in the right quantities to give the maneuver commander the decisive edge.

QM VULNERABILITIES

QM units have vulnerabilities that can affect their ability to provide support. Some of these are discussed in more detail below.

Limited Survivability and Defensibility

QM units, personnel, equipment, and supplies are vulnerable to threat attack. QM units have only limited firepower and a limited capability to defend themselves. Joint rear area security planning by QM leaders, military police (MP) unit leaders, and maneuver commanders will reduce the effects of attack by threat forces. QM leaders must recognize the symbiotic relationship between MP teams and platoons charged with area security, battlefield circulation responsibilities, and QM unit functions. Limited QM unit self-defense capabilities are enhanced by close coordination with MP units.

Loss or Interdiction of Key Areas

Loss or interdiction of airfields, pipelines, main supply routes, and transportation nodes will impair a logistic unit's capability to move supplies. The logistician will have to consider this in planning measures to counteract such losses.

NBC Attacks

Threat use of NBC weapons or warfare will hamper logistics units in providing support. The requirement for CSS units to perform their mission in a contaminated environment will seriously tax operations. In planning, commanders should take into consideration the degradation that will result in military task performance in an NBC environment caused by wearing mission-oriented protection posture (MOPP) gear. Soldiers wearing MOPP4 take considerably longer to perform most tasks because the protective clothing reduces mobility, agility, coordination, and dexterity. Decision-making and precision-control tasks are slowed even more than manual tasks. In an NBC environment, command, control, and communications are difficult. Wearing the protective mask degrades hearing, vision, and speech. Commanders and leaders must plan for a slower pace of operations and degradation of unit performance because of behavioral changes and leader exhaustion. The first priority will be to try to avoid a contaminated environment or NBC attack. Attacked units will require decontamination. Decontamination support will probably be limited, so units must apply resources to decontaminate as

soon as and as far forward as possible to limit the spread of contamination. Also, decontamination agents are highly corrosive and may affect the operation of some equipment or the condition of some supplies. Decontamination of food presents particular problems. Veterinary services will determine if food is contaminated. The remaining classes of supply may also present special problems. Cardboard boxes and other packaging material used for many types of supplies provide little or no protection against NBC agents or decontaminants.

Loss of Materials Handling Equipment (MHE)

Changes in force structure have reduced the number of soldiers in many logistics units. Future deployments will call for smaller forces. Loss of MHE could cause extended delays in support since additional soldiers needed to carry out the work load will, normally, not be available.

Loss or Delay of Reserve Forces

Over half of the Army's supply and field services structure resides in the reserve component (RC). This makes the RC a vital link in the overall logistics posture. Delay or loss of RC forces can directly result in backlogs of work. In mortuary affairs where RC units provide the bulk of the capability, a delay would result in a longer time for processing remains and possibly an increase in temporary burials. Other areas dramatically affected by the loss or delay of RC forces would include water, bath, fuel, and supply.

Vulnerability of Automation and Communication Equipment

A QM unit's success depends greatly on communication and automation equipment. The circuitry of these systems is highly vulnerable to the electromagnetic pulse, heat, and shock waves caused by nuclear explosions. With loss of automation equipment, a manual supply system will be needed. This could result in increased errors and delays. The loss of communications nodes will result in courier runs being made to the next available node until communications can be reestablished.

OPERATIONAL OVERVIEW

Good planning is the key to mission accomplishment. Regardless of the operation, the planning process is basically the same. Logistical preparation for an operation must be considered equal to the tactical and intelligence preparation. Successful QM commanders and staff personnel will have a comprehensive knowledge of the distribution system from the FLOT to the continental United States (CONUS) base and an understanding of the supported commander's intent. This knowledge will allow the commanders and staff personnel to anticipate requirements. It also is the basis for instant problem resolution, when required.

As the army becomes more CONUS-based, deployments of smaller, more mobile QM elements will emerge and we can expect more deployments but of shorter duration. Planning and training must focus on the maneuver commander's successful mission accomplishment, not simply on the buildup of supplies. QM leaders must anticipate requirements of the maneuver commander and project the correct supply and field services support to the area of operations. This will ensure the maneuver commander has the decisive edge required to fight and win the next battle.

The key to success for future deployments is extensive training with maneuver elements to gain an understanding of their intent and mission requirements. This and the development of deployable logistical support modules will ensure that QM units provide support at the right time and place and in the right amount.