

ANNEX A

Supply

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Supply is a wide-ranging function that extends from determination of requirements at the national level down to delivery of items to the user in the theater. It involves activities at all levels of logistics. It includes a broad assortment of items categorized in 10 classes and one miscellaneous category as depicted in Table A-1.

Table A-1. Classes of supply

CLASS	SUPPLIES
I	Subsistence, gratuitous health and comfort items
II	Clothing, individual equipment, tentage, organizational tool sets and kits, hand tools, administrative and housekeeping supplies and equipment
III	Petroleum fuels, lubricants, hydraulic and insulating oils, preservatives, liquids and gases, bulk chemical products, coolants, deicer and antifreeze compounds, components and additives of petroleum and chemical products, and coal
IV	Construction materials including installed equipment, and all fortification and barrier materials
V	Ammunition of all types, bombs, explosives, mines, fuzes, detonators, pyrotechnics, missiles, rockets, propellants, and other associated items
VI	Personal demand items such as health and hygiene products (soaps and toothpaste), writing material, snack food, beverages, cigarettes, batteries, and cameras (nonmilitary sales items)
VII	Major end items such as launchers, tanks, mobile machine shops, and vehicles
VIII	Medical materiel, including repair parts peculiar to medical equipment
IX	Repair parts and components to include kits, assemblies and subassemblies (repairable or nonrepairable) which are required for maintenance support of all equipment
X	Material to support nonmilitary programs such as agriculture and economic development (not included in Classes I through IX)
Miscellaneous	Water, maps, salvage, and captured material

THE SUPPLY SYSTEM

STRATEGIC CONSIDERATIONS

At the strategic level, supply activity focuses on the determination of realistic, supportable resource requirements; the acquisition, packaging, management, and positioning of supplies; and the coordinated movement of materiel into the theater base and staging areas.

Strategic planners determine requirements to support the force based on the national security strategy, the national military strategy, the missions the Army can expect to receive to achieve strategic end states, and theater strategies and campaign plans. They consider all potential sources of supplies in order to reduce the deployment requirements to support Army operations. These sources include all those discussed in Chapter 3, such as host nation support, LOGCAP, multinational forces, and contingency contracting. Actual management of supply operations at the strategic level is performed by commodity centers assigned to AMC, US Army Medical Materiel Agency (USAMMA), DLA, Defense Commissary Agency, and other defense agencies with the assistance of the ASCC in accordance with the CINC's directives and priorities.

Critical considerations include determination of stockpiling requirements and supply production capabilities. CSS personnel preposition some supplies in overseas regions (primarily where we have forward-presence forces) for initial support. They preposition certain critical supplies (as well as unit equipment) afloat to provide flexible support to forward-presence, reinforcing, or contingency forces. Some supplies are stored in CONUS military stockpiles. Other supplies, such as construction materiel, are routinely available directly from our economic base; the CONUS military system does not stockpile such supplies.

Centralized management of Army war reserve stocks enhances logistics responsiveness. AMC and the Office of the Surgeon General are the Army's managers of these stocks. The system provides central management oversight and the ability to rapidly posture stocks to respond to contingency requirements.

Strategic supply activities work closely with USTRANSCOM and its component commands. They synchronize their efforts with the CINC's Joint Operations Planning and Execution System (JOPES)-developed movement program to get supplies to the theater. They ensure that required supplies have unit line number designations and that supplies move from stockpiles or other sources to the theater to meet the priorities of the CINC. In CONUS, supplies in less than container loads move from storage locations to designated consolidation and/or containerization points for movement. When required to minimize handling in the theater, depots unitize and package supplies received from CONUS military stockpiles and the economic base and offer them to the transportation component command for movement. If a container contains multiple consignees, packaging will maintain consignee integrity. A copy of the documentation will accompany the container. Total asset visibility will provide an automated capability to track both the container and contents.

OPERATIONAL CONSIDERATIONS

Supply at the operational level involves the requisitioning or acquiring, receipt, storage, protection, maintenance, distribution, and salvage of supplies. Supply planners and managers must understand the CINC's priorities and the requirements for support of campaigns and major operations. Requirements include consideration of the needs of joint and multinational forces.

Supplies are throughput whenever possible from the POD or local sources to the appropriate SSA or receiving unit. Multiple consignee cargo comes to a supply activity to sort cargo before transshipment to the appropriate SSA or receiving unit.

The supply system depends on an efficient and effective materiel management system. MMCs must know the prioritized requirements of the force and the status of available resources. They manage distribution in coordination with movement control elements

who know the capabilities of the transportation system to move required supplies. This management requires an effective automated supply system as well as extensive coordination. MMCs will be linked to strategic and tactical supply and transportation elements to provide total asset visibility, as discussed in Chapter 2.

TACTICAL CONSIDERATIONS

Tactical-level supply focuses on readiness and supports the commander's ability to fight battles and engagements or achieve his MOOTW mission. CSS planners work with supporting commanders and MMCs to ensure the required supplies are available when and where the user needs them. Units carry a basic load of supplies with them to support their operations until the system can resupply them. When time and mission constraints require, a "push" system provides supplies. Under this type of system, planners estimate supply requirements and arrange to have supplies delivered to supported elements. As the theater matures and stocks become readily available, supply elements convert by commodity to a "pull" system. Requests generated by supported elements are the basis of a "pull" system. FM 10-1 discusses planning considerations and request procedures.

Both operational and tactical supply systems include SSAs operated by general support (GS) and direct support (DS) supply units. These units establish SSAs from the COMMZ as far forward as the brigade support area. On a temporary basis, DS elements may operate even further forward at forward logistics bases to reduce the distances users have to travel to receive support. The support structure at each command level from separate brigade/division up also includes a

materiel management organization to manage supply and maintenance operations.

Improved communications will allow management elements to perform routine functions in CONUS or forward-presence locations while critical capabilities required in theater deploy early in an operation. For example, as discussed in Chapter 2, part of the corps MMC (CMMC) may remain at its home station while force-projection cells (the forward CMMC) deploy to the area of operations with the force they support. The rear CMMC continues to support the stay-behind force while concurrently interfacing with the deployed cells to provide the required support forward. This split-base capability ensures only required elements deploy. This eliminates unnecessary forces in theater with related CSS demands. It also minimizes strategic lift requirements.

Under a "pull" supply system, requests enter the supply system when a using unit submits a request to its supporting DS supply element. If stocks are available, the DS element fills the request and notifies the MMC, which initiates replenishment. If it cannot fill the request, the supply unit passes it to the MMC. In that case, the MMC directs issue from GS stocks to the DS unit or passes the requisition to the appropriate MMC or commodity center to meet the requirement.

Retrograde of materiel usually involves supplies and repairable equipment. Repairable items are generally in maintenance facilities and returned to supply channels when restored to serviceable condition. Salvage items are unserviceable and uneconomically repairable. They are evacuated through the supply system, destroyed, or demilitarized on the basis of theater policy and commodity center instructions. FM 10-1 has details.

SPECIFIC SUPPLY CONSIDERATIONS

In addition to the generic principles guiding all supply operations, there are specific ones for each commodity. This section discusses the principles for

Classes I, II, III, IV, V, VI, and VII, and water. Annex D covers Class VIII, and Class IX coverage appears in Annex C.

CLASS I

Class I supply is directly linked to the field service of food preparation. The system for supply of Class I items is similar to the system used to distribute other classes of supplies. During the initial phase of a conflict, the system pushes rations--meals, ready-to-eat (MREs), T-rations, and B-rations. Personnel strength, unit locations, type of operations, and feeding capabilities determine the quantities and types of rations ordered and pushed forward. As the battlefield stabilizes, the supply system converts to a pull system with limited fresh fruit and vegetable supplements. The distribution system throughputs rations as far forward as possible.

Introduction of A-rations involves significant logistics expansion. They require refrigerated storage and distribution equipment. They also require potable ice for unit storage of items. FM 10-1 discusses these considerations as well as garbage disposal.

Bread or bread-like components are essential Class I components. Pouched bread will be the initial source for bread in a theater of operations. HNS or commercial vendors provide fresh bread as METT-T permits.

Health and comfort packages (formerly referred to as ration supplement sundry packages) are Class I supply items managed by the Defense Personnel Supply Center. They have a national stock number and are issued through the standard supply system without cost to soldiers in the early stages of a deployment. They contain items such as disposable razors, toothbrushes, toothpaste, and other personal care items. The Class I system provides packages until AAFES tactical field exchanges are operational and providing Class VI support. AR 30-7 has additional information on these packages.

The US Army Support Activity, an element of AMC, forecasts Army needs for semiperishable subsistence, computes Class I war reserve requirements, and approves requisitions (except during contingency operations) for operational rations. The Defense Personnel Support Center, an element of DLA, procures, inspects, stores, and distributes Class I supplies. It

provides various rations including individual (operational) rations and unitized group rations (UGRs). The UGR is configured in boxes which contain all semiperishable components. It is palletized in unit increments to meet task force needs. The UGR modules require separate issue of supplements (milk and bread). In addition, the system also provides menu enhancements such as cereal, salads, and fruit separately.

The operational level of Class I supply includes a total system manager. He plans supply operations to ensure that facilities and personnel are adequate to receive, store, and issue Class I supplies. MMCs at operational and tactical levels manage Class I supplies. A theater subsistence distribution company will process and distribute most subsistence in the theater. Perishable subsistence platoons will convert to subsistence platoons and work in conjunction with the distribution company and GS supply companies at corps and EAC levels. Teams from the platoons may operate at DS ration points. They will be OPCON to the DS supply unit commander in such cases.

CLASS II

Class II supplies include a wide variety of supplies and equipment from clothing and individual equipment to tools. (Unclassified maps will also be Class II items in the near future.) In most cases, Class II consumption is predictable. Demand history, together with anticipated fluctuations, can provide accurate forecasting of needs. Divisions carry a very limited stockage of Class II items since such items are bulky and impede mobility. Division supply elements normally only carry critical items. Such items may include chemical defense equipment, helmets, and mechanics' tools. Clothing supply creates a special challenge due to its excessive transportation and storage requirements. It requires intensive management to ensure an even and uninterrupted flow. Distribution plans for protective clothing and equipment also consider the threat and the service life of protective overgarments and filters.

CLASS III

Today's Army consumes large quantities of petroleum products in support of operations. Its ability to move and fight depends on its supply of fuel. There are two categories of Class III supplies--bulk fuel and packaged petroleum products.

Bulk Fuel

During peacetime, each service is responsible for planning and preparing for bulk petroleum support to its own forces. This includes managing war reserve and peacetime operating stocks. It also includes operating bulk storage, handling, and distribution facilities. Each service computes its requirements and submits them to the Defense Fuel Supply Center for supply and acquisition action.

During war (or in specified military operations other than war), the Army is responsible for the inland distribution of bulk fuels. This includes distributing bulk fuels to Air Force bases and Marines. This inland distribution responsibility requires the Army to provide the necessary force structure to construct, operate, and maintain overland petroleum pipelines and to distribute bulk fuels via non-pipeline means. (However, the Air Force and Marines remain responsible for the retail distribution of bulk fuels to their units.) Inherent in this responsibility is the requirement to manage the distribution of bulk fuels within the theater.

In an effort to obtain the optimum fuel distribution system, the services continue to reduce the number of bulk fuel products distributed by the military logistics system. The goal is to have one fuel on the battlefield. In addition, the services use standardized fueling procedures and organizations whenever possible and ensure interoperability of fuel containers and handling equipment.

Forces obtain bulk fuel locally within the theater whenever possible. Tanker ships bring in supplies not available in the theater. In developed theaters, they are received at marine petroleum terminals and transferred by pipeline to tank farms. Army assets may have to

renovate the existing system or supplement it with hose lines and collapsible tanks. Pipelines and hose lines extend as far forward as practical to reduce transportation requirements. Other means of bulk delivery, such as barges, rail tank cars, tankers, and aircraft, supplement the system.

Units pass forecasted requirements up S4/G4 channels to MMCs which manage distribution in coordination with movement control and GS supply elements. Tankers, rail tank cars, and hose lines move bulk fuels from GS to DS supply elements. Deliveries bypass intermediate storage locations whenever possible. Bulk transporters normally move fuel from the DS level to using units. Using units maintain a prescribed load of fuel to allow them to operate until the system can resupply them. They use organic equipment to receive the product and refuel their vehicles and aircraft. A key exception to this principle is refuel-on-the-move operations. Though these operations may use unit assets, typically they involve use of equipment of supporting fuel units. The purpose is to ensure a unit's vehicles and bulk fuel assets are topped off before they arrive in the tactical assembly area prior to an operation. Details are in FM 10-71.

Limited availability may require fuel allocations. Logistics staff officers recommend allocations based on priorities provided by operations planners. They pass approved allocations to MMCs.

Undeveloped theaters receive bulk supplies from the Navy's offshore petroleum discharge system in over-the-beach operations. Hose lines move fuel to collapsible storage tanks. In emergencies, US Air Force aircraft may resupply ground forces. As in a developed theater, the system uses pipelines and hose lines as much as possible to move bulk fuel forward; rail, motor, air, and water transportation assets supplement the pipeline and hose line system.

Packaged Petroleum Products

Packaged products include lubricants, greases, hydraulic fluids, compressed gasses, and specialty items

that are stored, transported, and issued in containers with a capacity of 55 gallons or less. (Normally, this category does not include fuels.) Managers use the principles of distribution associated with Class II supplies to manage packaged petroleum products. These products require intense management due to quality surveillance needs and criticality to combat effectiveness.

CLASS IV

Class IV items consist of fortification, barrier, and construction materials. Units use barrier and fortification materials to prepare fighting and protective positions as well as field fortifications. Engineers use Class IV materials to prepare fortifications beyond the capabilities of units. They also use them for such functions as--

- Upgrading, maintaining, or building roads, bridges, and bypasses.
- Repairing airfields or building expedient airstrips and landing zones.
- Assembling rafts or bridges for river crossings.
- Upgrading, repairing, or building facilities in support of the CSS effort or to enhance the infrastructure of the host nation as part of an MOOTW.

Most materials are standard items used by both the military and civilian sectors. Whenever possible, forces obtain them locally. Otherwise, items are requested, managed, and distributed using standard supply procedures. Because of their bulk and weight, transportation units throughput them as far forward as possible to avoid overburdening the limited transportation assets of using units and to minimize handling.

CLASS V

Class V includes all munition items from small arms ammunition, grenades, mines, rockets, missiles, and tank and artillery cartridges to all components for separate loading artillery rounds, chemical rounds, and pyrotechnic/specialty items such as explosive bolts, ejection cartridges, and demolition charges.

The ammunition logistics system provides the right type and quantity of ammunition to the force in any contingency from general war to MOOTW. The

challenge is to move required amounts of modern high-lethality ammunition into a theater from the CONUS sustaining base and other prepositioned sources in a timely manner to support a CONUS-based contingency response force. The system must also be flexible enough to meet changing ammunition requirements in simultaneous operations around the world. The objective of the system is to provide configured Class V support forward to the force as economically and responsively as possible with a minimum of handling or reconfiguration. The unique characteristics of ammunition complicate the system. These factors include its size, weight, and hazardous nature. It requires special handling, storage, accountability, quality assurance, and security.

Effective and efficient ammunition support requires integrated information and distribution management at all levels from the combat user to the CONUS sustainment base. Ammunition managers use combat loads rather than the previously used days of supply. Combat loads measure the amount of Class V a unit can carry into combat on its weapon systems. The exception to this principle is field artillery where the unit of measure is the battalion load. That is the amount of Class V that an artillery battalion can move uploaded on its weapon systems as well as with all its organic supply vehicles.

The management process begins during peacetime planning. CINCs, Army component commanders, and service/readiness commands determine Class V requirements for possible contingencies. They consider the availability of stocks, storage locations, deployability into various theaters, and the responsiveness of the production base to meet shortfalls. It is unlikely that future conflicts will require the massive volumes of stocks needed to support the European AirLand force of the 1980s. New technologies, such as liquid propellants and fixed cannon cartridges, coupled with future high-lethality technologies like laser and directed energy weapons will further reduce the volume of required Class V materials.

As the force receives these new weapon systems and munitions, there will be an evolving mix of

“high-low” technology munitions which the logistics system must be able to support. The Class V system must also be capable of supporting joint forces and a variety of multinational forces. Multinational forces may not be able to utilize efficiencies of US logistics technologies, such as the palletized load system or container/materials-handling equipment.

Ammunition planners must integrate these factors into the LPT. Integral to the LPT and requirements determination process is the planned development of the theater. Ammunition units deploy to handle incoming stocks and support the force as it matures to meet the CINC’s plan. Initial theater Class V unit requirements may be small. For example, they may include the organic support for an airlifted light brigade, a port ammunition accountability detachment, and a company to handle initial receipt of prepositioned stocks and support of a brigade task force. The theater, however, requires follow-on ammunition capabilities in proportion to the combat forces deployed. Along with being rapidly deployable, these ammunition units require mobility, and C3 and computer capability to control operations and provide the critical decision support and management link within the theater and with the CONUS sustaining base.

Because of the nature of Class V support, strategic planners must consider not only the operational level but also the needs of the tactical system. At the strategic level, the ammunition system involves:

- Total requirements.
- Army stockpile management, including acquisition, long-term storage, and strategic projection (distribution) into the theater.
- Recovery.
- Retrograde.
- Disposal of Class V stocks.

The operational level is the enabling link between the strategic and tactical levels. The theater strategic and operational-level systems are responsible for establishing the theater-level reception, management, and distribution of stocks. These stocks arrive in theater either from CONUS or OCONUS storage sites on surface vessels or via aerial delivery. They may also

arrive from fast-response prepositioned afloat ships. Containerization is an effective intermodal system at the strategic and operational levels. However, it requires large CHE and the capability to unstuff containers and load ammunition onto cargo transport for distribution to forward ammunition transfer points. Breakbulk ammunition is an inefficient configuration for large volume movement in CONUS, at ports, and loading/offloading of ships. However, it allows more flexible handling and movement by smaller non-CHE ammunition units in the theater. Logistics planners ensure a proper mix of stocks in theater. At the end of a conflict, theater strategic and operational logisticians redeploy stocks out of the theater and into the national strategic system.

Combat forces initially deploy into theater with their ammunition basic loads. Commanders project their Class V needs (required supply rate) and allocate available stocks (controlled supply rates) in accordance with combat priorities to weight the battle. Forces receive resupply in the forward areas from the tactical Class V system. That system operates required ammunition storage, supply, and transfer points.

FM 9-6 details the doctrinal layout of a mature ammunition system in a developed theater.

CLASS VI

Class VI supplies are Army and Air Force Exchange Service items for sale to troops and authorized individuals. Class VI supplies may be available through local procurement, through transfer from theater stocks, or through requisitioning from the AAFES in CONUS. Available shipping space dictates Class VI supply to the theater. Class VI supply responsibilities differ significantly from other classes of supply.

Command logisticians include Class VI in operations plans. Soldiers deploy with limited quantities of health and comfort items to meet initial personal requirements. The command may authorize the issue of Class I health and comfort packages (HCPs) as long as necessary. AAFES provides Class VI support beyond the issue of HCPs to meet the theater commander’s needs. Class VI can be limited to basic HCP items or

expanded to include food and beverages and entertainment items. The availability of Class VI is a morale multiplier.

AAFES has responsibility for worldwide planning and monitoring of all tactical field exchanges. HQ AAFES-Europe plans and monitors tactical operations within the NATO area of responsibility. In the Pacific area, HQ AAFES-Pacific is responsible. Other regions are the responsibility of HQ AAFES. AAFES determines requirements; procures, stores, and distributes supplies; operates resale facilities; designates the parent exchange; and determines whether an operation requires an operational site general manager. AAFES support is tailored to meet the theater commander's needs.

Tactical field exchanges (TFEs) become branches of a parent exchange designated by the appropriate AAFES headquarters. These TFEs have a unique facility number used on all transactions--all of which are routed through the parent exchange. The parent exchange orders the merchandise, prepares the equipment and supplies required, and prepares a change fund and petty cash fund. These are then shipped/issued to the tactical field exchange officer.

When an operation involves a large number of TFEs, AAFES may assign an AAFES civilian manager as the operational site general manager. The site general manager becomes responsible for many of the responsibilities of the parent exchange. The operations plan or exercise directive and the AAFES support directive specify responsibilities. AAFES may also assign a liaison officer. The liaison officer is usually a military officer assigned full time to AAFES. He assists the site general manager. He serves as the liaison between the military commands and AAFES.

The TFE officer (TFEO) is an officer or noncommissioned officer appointed by the Army service component commander or subordinate commander to manage a TFE. He is responsible and accountable to AAFES for all phases of TFE operations. He is the store manager.

The unit supported by a TFE assigns military personnel to operate it. The TFEO and all military personnel assigned to the TFE work for the local commander. The local commander provides operational and administrative support for the TFE.

TFE operations have three phases. The pre-deployment phase is the loading/shipping phase. Military planners working with AAFES determine the stock assortments and quantities. AAFES orders these items and ships them to the parent exchange for consolidation and loading into containers.

During the deployment phase the containers are shipped to the operational area. The theater commander determines their movement priority. The TFEO deploys and arranges for container movement to the TFE site. When the containers arrive at the TFE site, the TFE staff conducts the appropriate inventories and establishes TFE operations.

At the end of the operation, TFE personnel package remaining supplies and return them to the parent exchange. The parent exchange inventories, accounts for, and returns the merchandise and operating supplies and equipment to AAFES stocks. It also reconciles all documentation, sales receipts, and returns. At this time, the TFEO is relieved of accountability for the TFE.

General planning guidance for Class VI support is in AAFES Exchange Service Regulation 8-4. Specific guidance on operating a TFE is in AAFES Exchange Operating Procedure 8-6.

CLASS VII

Class VII supplies consist of major end items such as launchers, tanks, vehicles, and aircraft. A major end item is a final combination of end products which is ready to use. Due to their importance to combat readiness and their high costs, Class VII items are usually controlled through command channels. If not, the supporting MMC controls them. Each echelon intensely manages the requisitioning, distribution, maintenance, and disposal of these items to ensure visibility and operational readiness.

Forces report losses of major items through both supply and command channels. Replacement of losses requires careful coordination and management. As discussed in Chapter 2, weapon system managers at each command level work to maximize the number of operational weapon systems. Replacement requires coordination among materiel managers, Class VII supply units, transporters, maintenance elements, and personnel managers.

Supply units at the operational level deprocess weapon systems arriving in theater from storage or transport configuration and make them ready to issue. They install all ancillary equipment and ensure that basic issue items are on board and that equipment is fueled. Weapon systems stored in war reserve stocks must be at a low level of preservation so supply elements can make them ready for issue within a few hours, not the several days required to deprocess from Level A storage.

WATER

Annex F discusses water purification, a field service. Normally, units receive water by supply point

distribution with only limited unit distribution. Water elements set up water points as close to the using units as practical given the location of a water source and the commander's intent.

The DISCOM operates the water points in the division area. In most areas of the world the division is self-sufficient. In arid regions and other unusual circumstances, the division support units require additional storage and distribution capability. Under these special conditions, the division receives water as outlined in Annex F.

EAD supply companies provide water to nondivisional customers on an area basis. They operate supply points at approved water sources. In most areas of the world these DS units are capable of meeting the water purification and distribution needs of all nondivisional customers. Like division elements, they require augmentation under arid or other special conditions.

FM 10-52 has more details on water supply.