



Operation Iraqi Freedom - “It Was a Prepositioned War”



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Today, we are riveted by a kaleidoscope of images, including pictures of U.S. tanks rolling through downtown Baghdad and American soldiers patrolling Iraqi towns and villages. The logistics aspects of the war effort started months before the actual fighting. Operation Iraqi Freedom began with the movement of weapon systems, ammunition, and much more, the majority of it coming from prepositioned stock that began the journey in the summer of 2002. A division's worth of equipment was provided through prepositioned stocks that had been maintained in storage aboard ships. The soldiers of the 3rd Infantry Division (Mechanized) had equipment that was ready to go to war. This was the first time in the Army's history that significant quantities of prepo were used to fight a war.

*General Paul J. Kern, Commanding General,
U.S. Army Materiel Command, October 2003*

Introduction

Perhaps the principal function of the logistician is to anticipate the needs of the warfighters and to have the necessary equipment and supplies at the appropriate location so that soldiers can accomplish the mission. In recent years, as the U.S. Army has become more of a CONUS (Continental United States)-based force, it has stored materiel in places around the world to support contingency operations, whether peacekeeping or humanitarian efforts. The basic principle of prepositioning is to have the equipment staged forward or on ships so that troops can fly in from the U.S., draw their equipment in theater, and conduct combat operations. Operation Iraqi Freedom (OIF) is the first war the U.S. has fought using this preposition doctrine, and it was successful. The 3rdID(M) rolled into Baghdad on prepositioned stocks (prepo).

The following pamphlet tells the story of how the Army and AMC developed preposition doctrine and implemented innovative capabilities, including huge catamarans for transport. Prepo enabled the U.S. to fly troops to Kuwait, where they fell in on equipment and prepared for operations in a matter of days. That timing proved crucial to the success of the mission, with Americans preparing and fighting well inside the cycle anticipated by the Iraqi regime. This “running start” was a major factor in the quick strike into the heart of Iraq.¹

The story and the mission continue with the RESET activities, including the turn-in and reconstitution of equipment used in the war. This process will be a key component in the Army’s push to provide the Joint Team both rapid expeditionary capabilities and the ability to conduct sustained land campaigns.



Aerial view of Camp Arifjan. U.S. Army photo.

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APS

“It was a prepositioned war. The Third Infantry Division (3rdID(M)) didn’t bring their stocks from home station. They came here and fought our prepo fleet. Every tank, every Bradley, every howitzer, every MLRS (Multiple Launch Rocket System) that crossed the border and went north and went into Baghdad, every one of those systems was a prepo system.”

Brigadier General Vincent E. Boles, Commanding General,
Army Materiel Command, Southwest Asia (AMC-SWA).²

Army Prepositioned Stock (APS) proved its value in Operation Iraqi Freedom. On 5 April 2003, when elements of the 3rd ID (M) rolled through Baghdad on Thunder Runs, the equipment performed as advertised.³ In 1990-1991, during Desert Shield/Desert Storm (ODS/S), the buildup of troops and equipment required months and shipment of extensive equipment and supplies from CONUS and Europe. In OIF, the APS program provided enough prepositioned equipment to support a division for 30 days. This enabled the 3rd ID(M) to fly into Kuwait, deploy rapidly, train in the desert, and to strike into Iraq quickly.



“I do want to thank the AMC community for their support in this,” said Major General Buford Blount, Commander of the 3rdID (M). “It’s clearly something we could not have done without us working as a team. It took a lot of good teamwork to make all of this happen, and everybody was focused on getting the job done. I think our people integrated very well early on and made it happen.”⁴

In photo, Maj. Gen. Buford Blount looks over destruction at a presidential palace in Baghdad. John Moore, Associated Press, in Pittsburgh Post-Gazette (April 13, 2003), web site.

From a minimal presence in theater, the AMC force grew to more than 8,500 by the cessation of Decisive Operations in May 2003. In terms of prepositioned equipment, AMC provided stocks from ships, including 6.4 million MREs (meals ready to eat) and 58 thousand tons of ammunition. Prepositioned stocks on land included another 8 thousand tons of ammunition as well as 324 tanks, 374 Bradleys, 9,426 HMMWVs (High Mobility Multi-purpose Wheeled Vehicles), and 7,074 other trucks. Combat Equipment Groups (CEGs) from CONUS and Europe flew to the Area of Operations (AO) and conducted download and sustainment of equipment. Operational Readiness Rates for the 3rdID(M) remained high throughout the operation.⁵

Background – From POMCUS to Prepo

The end of the Cold War brought a reduction in the size of the U.S. military and shifted the focus and concentration from Central Europe. At the same time, the U.S. has undertaken a multitude of peacekeeping and humanitarian missions around the world. To accomplish these varied missions, the Army has become increasingly CONUS-based but with greater power projection capabilities.

One of the major lessons learned from the ODS/S experience was the need to preposition equipment to support the deployment of heavy forces. Following the Gulf War, the Joint Chiefs of Staff (JCS), concerned by the long time it took to deliver heavy forces and associated logistical support, concluded that “limitations in mobility forces had imposed considerable risk.”⁶

The 1992 Department of Defense (DoD) Mobility Requirements Study looked at the forces the U.S. would need to fight two major regional conflicts in quick succession. In addition to new airlift and sealift, the JCS recommended that the Army preposition sets of heavy equipment and combat support units onboard ships placed closer to potential trouble spots.⁷

About the same time, the Army developed the Army Strategic Mobility Program (ASMP),^a which called for prepositioning equipment and Combat Support (CS) and Combat Service Support (CSS) units onboard ships in the Indian Ocean^b so they could be delivered to either the Persian Gulf or the Korean Peninsula within 15 days. Surge sealift ships would transport heavy divisions from CONUS to reinforce operations within 30 days. The ASMP^c outlined the need for additional sealift and preposition afloat ships, the C-17 cargo aircraft, and upgrade of all CONUS-based elements necessary to move forces to and outload from the air and seaports.⁸

In 1995, the JCS approved the Mobility Requirements Study Bottom-Up Review Update, which built on the earlier studies. The Update recommended increases to the Ready Reserve Fleet, the procurement of 19 Large, Medium Speed Roll-on/Roll-off Ships (LMSRs), the prepositioning of 16 ships in Southwest Asia with Army equipment, and procurement of 120 C-17 aircraft.⁹

The prepositioning program was influenced by the Marine Corps’ Maritime Prepositioning Force (MPF), which was created in the 1980s as the Marine Corps’

^a The ASMP Action Plan was published in March 1993.

^b Diego Garcia, a jungle reef in the Indian Ocean, is a British territory. In the early 1970s, the U.S. Navy began construction of a communications station. In the 1980s, what began as a communications station on a remote atoll became a major fleet and U.S. armed forces support base, home to prepositioned ships as well as Air Force elements.

^c The ASMP consisted of 27 tasks, which range from development of doctrine and training, to acquisition of aircraft, ships, rail cars, and containers, to improvements to infrastructure at CONUS installations (such as roads, loading docks, rail lines, and warehouses), port facilities, and maintenance facilities. U.S. Army Materiel Command, Annual Command History for FY 1993, p. 197.

answer to calls for a rapid deployment force for the Middle East.^a MPF ships delivered the first tanks for the 7th Marine Expeditionary Battalion (MEB) to Saudi Arabia during ODS/S.¹⁰ Cold War predecessors of today's APS program were POMCUS (pre-positioning of materiel configured to unit sets) in the central region of Europe, and TRU/ARPS (theater reserve in unit sets/Army readiness package south) in Italy. With POMCUS, unit sets of equipment stored overseas were earmarked for specific forces based in CONUS. For example, a particular mechanized division knew precisely where its POMCUS equipment was stored, knew exactly what types and models of equipment it would draw, and used previously prepared hand receipts to rapidly transfer property accountability. Annual exercises such as Return of Forces to Germany (REFORGER) validated POMCUS procedures.¹¹



REFORGER 84. 5th ID tank commander waves. Photo by Markus Bach. U.S Army, Europe web site, "Photos."

The Cold War military maintained not only hundreds of thousands of troops in Europe, but supplies and equipment for tens of

thousands more: beans, bullets, missiles, trucks, even entire battalions of tanks parked in warehouses and waiting to go. The stockpiles held everything a unit needed except its men, the lightest part of a modern army. It took just days to fly the troops in from the states for the annual "REFORGER" exercises in Europe, when they would break out their stored gear for war games.¹²

In October 1994, the Army tested the afloat prepositioning concept when Iraqi forces began massing near the Kuwaiti border. The U.S. responded with Operation Vigilant Warrior, in which prepositioned ships steamed to Saudi Arabia and unloaded their cargo. The first ships began unloading 12 days after sailing from Diego Garcia. Troops of the 24th Mechanized Infantry Division flew into Kuwait to meet the tanks and other combat equipment already prepositioned there.¹³

The Army also tests the concept in other potential trouble spots around the world. APS-4, in Korea, contains equipment and supplies needed for two armored battalions and one mechanized infantry battalion. These unit sets enable the Army to airlift personnel from a heavy brigade and its support elements into Korea from bases outside the Republic of Korea (ROK) to link-up with the brigade's equipment and supplies at a

^a The Marines also fought prepositioned equipment in Iraq. See below.

prepositioned land site. Part of Foal Eagle 2002, the Reception, Staging, Onward Movement, and Integration (RSOI) exercise tested the Time-Phased Force Deployment (TPFD) list for currency and adequacy, as U.S. forces arrived from bases outside Korea.¹⁴



A Korean Service Corps mechanic climbs out of a U.S. Army M88 Recovery Vehicle at the APS-4 railhead during RSOI activities at Camp Carroll, ROK. Photo by SFC Keith J. Gardner, USA. Asian Pacific Defense Forum, Summer 2002, "RSOI/Foal Eagle 2002, Korean-U.S. Forces Enhance the Defense of Korea in Exercise," web site.

Doctrine – Forward Presence and Power Projection

"We are more and more an expeditionary force; strategic air and sealift complemented by our pre-positioning initiatives, must be our number one priority."

General John M. Shalikashvili, Chairman,
Joint Chiefs of Staff, 1995¹⁵

U.S. military strategy rests on the twin concepts of forward presence and power projection to facilitate accomplishment of military objectives.^a Complementing overseas presence, power projection is the ability of the U.S. to apply all necessary elements of national power (military, economic, diplomatic, and informational) at the place and time necessary to achieve national security objectives. Credible power projection requires the capability to rapidly deploy military forces sufficiently robust to prosecute and terminate conflicts on terms favorable to the U.S. and its allies.¹⁶

The Army has designated CONUS bases from which assigned forces deploy as "Power Projection Platforms." These key bases are equipped with expanded and modernized loading and cargo handling facilities for rapid transport of military forces and equipment to designated ports of embarkation, that is, seaports and airfields. These modern, capable power projection platforms enable our strategic mobility triad - strategic airlift, strategic sealift, and prepositioned equipment to operate at peak efficiency.¹⁷

Aerial view of Diego Garcia. U.S. Army Transportation Center and Fort Eustis, Deployment Process Modernization Office, (DPMO) web site, "Photo Gallery."



There are two types of prepositioning in the triad - prepositioning ashore (APS-2/4/5) and prepositioning afloat (APS-3). Prepositioning ashore allows heavy equipment to be kept in-theater, near the point at which it will be needed. Prepositioning afloat allows for forward prepositioning of sustainment stocks, unit

equipment, and port opening capabilities on Military Sealift Command vessels home based in Diego Garcia and Guam^b. The vessels can be sailed worldwide in response to any contingency. Together, these assets enhance force projection by allowing CONUS-

^a The doctrinal framework for APS operations can be found in the Field Manual Series 100-17, especially FM 100-17-1, *Army Prepositioned Afloat Operations*, and FM 100-17-2, *Army Prepositioned Land*.

^b The Military Sealift Command maintains 40 prepositioned ships at Diego Garcia and Guam. Fourteen of the ships carry enough equipment and supplies to sustain two Army heavy divisions for up to 30 days. Another 14, known as Maritime Prepositioning Ships, are designed specifically to transport supplies and equipment for the Marine Corps. The other vessels carry munitions for the Air Force and Navy and fuel for the Defense Logistics Agency. Harold Kennedy, "Navy's Sealift Command Picks Up the Pace" National Defense Magazine (July 2003), from web site.

deployed personnel to be equipped with in-theater stockpiles. This reduces the need for heavy lift assets during the critical "Early Entry" phase.¹⁸

APS is owned by Headquarters, Department of Army (DA) and is not linked to Army Combatant Commanders (COCOMs) or specific regional commanders or theaters. APS is managed and accounted for by AMC and the Office of The Surgeon General (OTSG). The Army Field Support Command (AFSC), a Major Subordinate Command (MSC) of AMC, and the U.S. Army Medical Materiel Agency (USAMMA) manage APS. During military operations, APS draws are accomplished under the AMC LSE (Logistics Support Element) umbrella organization.

APS are protected go-to-war assets and will not be used to improve peacetime readiness or fill unit shortages. HQDA must approve all issues and loans of APS. There are four categories of APS, as described below.¹⁹

- **Brigade and Unit Sets.** The unit sets consist of organizational equipment - end items, supplies, and secondary items - configured into brigade sets, division units, and corps/echelon above corps (EAC) units.

- **Operational Project Stocks.** Operational project stocks are materiel above normal table of organization and equipment (TOE), tables of distribution and allowances (TDA), and common table of allowances (CTA) authorizations tailored to key strategic capabilities. They are primarily positioned in CONUS, with tailored portions or packages pre-positioned overseas and afloat.

- **War Reserve Sustainment Stocks.** War reserve stocks are acquired in peacetime to meet increased wartime requirements. They consist of major and secondary materiel aligned to provide minimum essential support to combat operations and post-mobilization training beyond the capabilities of peacetime stocks, industry, and host nation support (HNS). Sustainment stocks are pre-positioned in or near a theater of operations to last until re-supply at wartime rates or emergency rates are established.

- **War Reserve Stocks for Allies (WRSA).** WRSA is an Office of the Secretary of Defense (OSD) directed program that ensures U.S. preparedness to assist designated allies in case of war. WRSA assets are pre-positioned in the appropriate theater and owned and financed by the U.S. They are released to the proper Army component commander for transfer to the supported allied force under the Foreign Assistance Act upon a declaration of defense condition 2, and under existing country-to-country memorandums of agreement.

Normally, land based prepositioned equipment is stored in controlled humidified warehouses and the equipment is entered in a time - interval cyclical maintenance program where combat vehicles are serviced every 30 months and wheels are serviced every 48 months. The afloat fleet was on a ship download/upload maintenance schedule that normally spanned about 30 months. The goal for all equipment, whether land-based or afloat, is that it be maintained as 10/20, recognizing that it can be issued as "Fully Mission Capable" (FMC).^{a20}

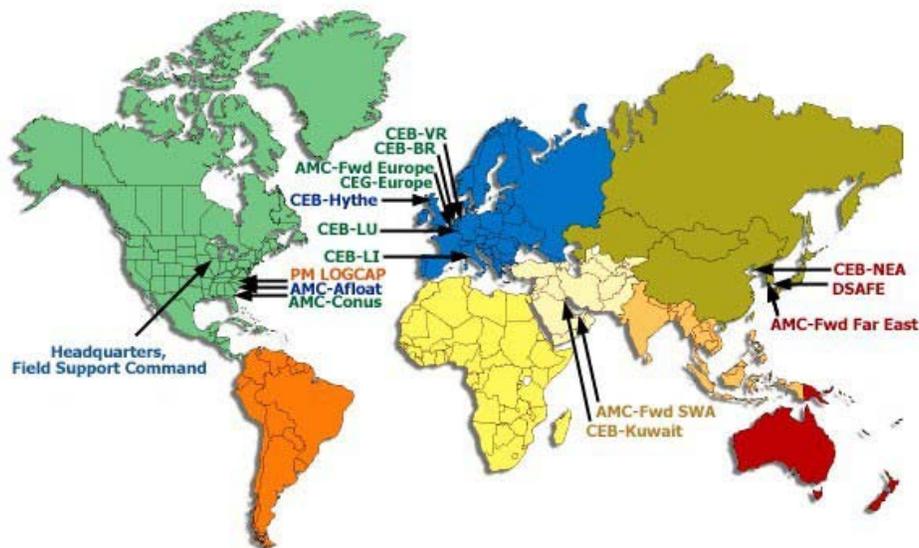
^a FMC means that all the vehicle's systems work and will succeed in combat, although there may be some minor parts broken or missing.

AMC Organizes

“Attention should be given to the APS Afloat and Ashore (FM 100-17 series), along with the AMC deployable tailored contingency Logistics Support Element (LSE).”

U.S. Army Forces Command Regulation 700-2,
FORSCOM Standing Logistics Instructions²¹

Effective 1 October 1993, DA directed AMC to assume responsibility for the Army War Reserve (AWR) Program to provide a central management for war reserve stocks, which at that time consisted of four separate stockpiles: AR-1, CONUS; AR-2, U.S. Army, Europe; AR-3, Prepositioned Afloat; and AR-4, Korea. The Depot Systems Command (DESCOM), an AMC MSC, became responsible for maintaining the stockpiles.



2003 map shows AFSC coverage worldwide. AFSC web site, “Worldwide Map.”

In a 1995 organizational realignment within AMC, DESCOM was merged into the Industrial Operations Command (IOC), headquartered at Rock Island Arsenal, IL. During the late 1990s, AMC implemented several initiatives to strengthen and rationalize its services to soldiers in the field. In 2003, AMC stood up AFSC as an MSC to manage the Army’s Global Prepositioning Strategy in support of deploying forces.^{a22}

In 2003, AMC’s various MSCs managed the procurement and distribution of APS equipment and secondary items of supply, while AFSC managed the storage and handoff of stocks at the APS sites, which were aligned as follows:

- APS-1, CONUS. The APS-1 consists of operational projects and sustainment stocks stored in CONUS depots.

^a The Commander of AFSC oversees major parts of three critical programs – APS, Logistics Assistance Program (LAP), and Logistics Civil Augmentation Program (LOGCAP).

- APS-2, Europe. Combat Equipment Group-Europe (CEG-E), headquartered in Eyselshoven, the Netherlands, is responsible for maintaining and storing APS-2 stocks at Combat Equipment Battalion (CEB) Luxembourg; CEB Vriezenveen, the Netherlands,^a CEB Brunssum, the Netherlands; CEB Rhine Ordnance Barracks, Kaiserslautern, Germany; and CEB Livorno, Italy. CEB Livorno also maintains inventory accountability for APS ammunition stored in Israel.^b

- APS-3, Afloat. Combat Equipment Group-Afloat (CEG-A), headquartered at Goose Creek, South Carolina, is responsible for the APS-3 afloat program and also oversees maintenance of watercraft and equipment aboard Prepo ships at CEB-Hythe, England, and the Army Maintenance Detachment-Diego Garcia.

- APS-4, Northeast Asia (NEA). AMC Forward-Far East, headquartered at Camp Market, Korea, maintains APS-4 stocks at CEB-NEA, located at Camp Carroll, Korea.^c

- APS-5, SWA. AMC Forward-Southwest Asia, headquartered at Doha, Qatar, is responsible for APS-5 stocks maintained in storage at CEB-Kuwait (Camp Arifjan) and CEB-Qatar (Camp As Saliyah).

Four automated systems facilitate management of the stocks. All four will transition into AMC's new enterprise resource planning system, the Logistics Modernization Program (LMP).

- The Commodity Command Standard System (CCSS) at each MSC manages the procurement, stock, store, issue, and accounting of APS equipment and secondary items of supply.

- The Standard Depot System (SDS) maintains the accountable records for equipment and secondary items.

- The Automated Battlebook System (ABS) consists of data on equipment at all APS sites, land and afloat, including the National Training Center (NTC). The Battlebook text is segmented into various levels, from a general high-level to a more specific section-level view. The text describes the vessel's characteristics and provides cargo information as well as current stow plan. That information is designed to help facilitate deployment planning, ship download, and scenario staging. ABS answers the question, "What must I take with me to the fight?"²³

- The Army War Reserve Deployment System (AWRDS) is a relational database that contains information on APS stocks contained in warehouses and aboard ships. AWRDS provides visibility and accountability for APS equipment and allows for efficient transfer of those stocks from the AFSC to the warfighting units using that equipment. AWRDS also provides ease of communications between the wholesale and retail reporting systems of the AWR community.²⁴

^a Both Vriezenveen and Brunssum were closed in February 2004.

^b U.S. Kosovo Forces (KFOR) and U.S. Forces in Bosnia (SFOR) have used equipment from APS-2 to support ongoing operations. Tanks, Bradley vehicles, howitzers, and mortars are among the major combat systems provided. For SFOR, 16,683 pieces of equipment were shipped between December 1995 and September 2000. For KFOR, CEG-E provided 10,678 pieces of equipment between April 1999 and May 2001. U.S. Army Deputy Chief of Staff for Logistics (DALO-FPP), Information Paper, subject: Army Prepositioned Stocks in Europe (APS-2), dated 10 September 2001.

^c Operational and sustainment stocks are stored in Japan, and other operational stocks are stored in Hawaii.

AFSC manages and integrates three major elements crucial to the prepositioning strategy, land- and sea-based prepositioned stocks and people. In addition to the Combat Equipment Groups stationed around the world, AFSC, through the LSE, coordinates all AMC activities in theater. The LSE concept grew out of the ODS/S experience, when AMC established the ad hoc Army Support Group in an effort to centralize command and control of APS activities as well as the Logistics Assistance Program (LAP) and the repair activities from the various commodity commands. In support of peacekeeping and humanitarian missions, an LSE was sent to Florida (Joint Task Force Andrew, 1992), Somalia (Operation Restore Hope, 1992-1993), Rwanda (Operation Support Hope, 1994), and Haiti (Operation Uphold Democracy, 1994).

The AMC LSE or AMC-Forward fills gaps in the CSS area. There are four Forward elements. AMC-Forward-CONUS, located at Fort McPherson, GA; AMC-Forward (Europe), located at Seckenheim, Germany; AMC-Forward (Far East), located at Camp Market, Korea; and AMC-Forward (SWA), located at Doha, Qatar.²⁵ In the Time-phased Force Deployment Data (TPFDD), most CSS units and support elements are scheduled to arrive after the combat units. The Forward, analogous to the cadre, provides a planning and coordination cell that can be expanded into an LSE in time of need to speed support to deploying troops. During operations, the LSE or Forward is usually co-located with the senior Army logistics command.^a

The AMC LSE deploys rapidly and establishes command and control (C2) of all AMC assets in theater, including the LAP and repair activities. Initially, the most obvious support to the warfighter is control of APS. Under LSE C2, the Combat Equipment Groups and Battalions hand off APS materiel to deploying units, perform maintenance, and, later, recover and retrograde the materiel.

The LAP program mission is to provide a single face to the field for AMC elements, integrate national level logistics support into the theater, fill logistics gaps with AMC technical capabilities, advise commanders on AMC technical and logistics management capabilities, and tailor support based on tactical commanders' requirements.

The Logistics Civilian Augmentation Program (LOGCAP) is a closely related program also managed by AFSC. LOGCAP provides force projection support missions with contractors who perform selected services to sustain U.S. forces in support of DoD missions. This contingency contracting leverages civilian corporate resources to multiply logistics services support and engineering construction support and provides a rapid and responsive contract capability that augments U.S. Forces capability. LOGCAP was established in 1985. It has been implemented in several areas, including Rwanda, Haiti, Bosnia, Kosovo, Panama, Korea, East Timor, the Philippines, Uzbekistan, Afghanistan, Djibouti, Iraq, and Kuwait.

One of the major new APS assets is Force Provider. This program provides a full spectrum of support facilities that provide Quality of Life. Force Provider modules make up the Army's containerized tent cities that can be tailored in various ways to meet

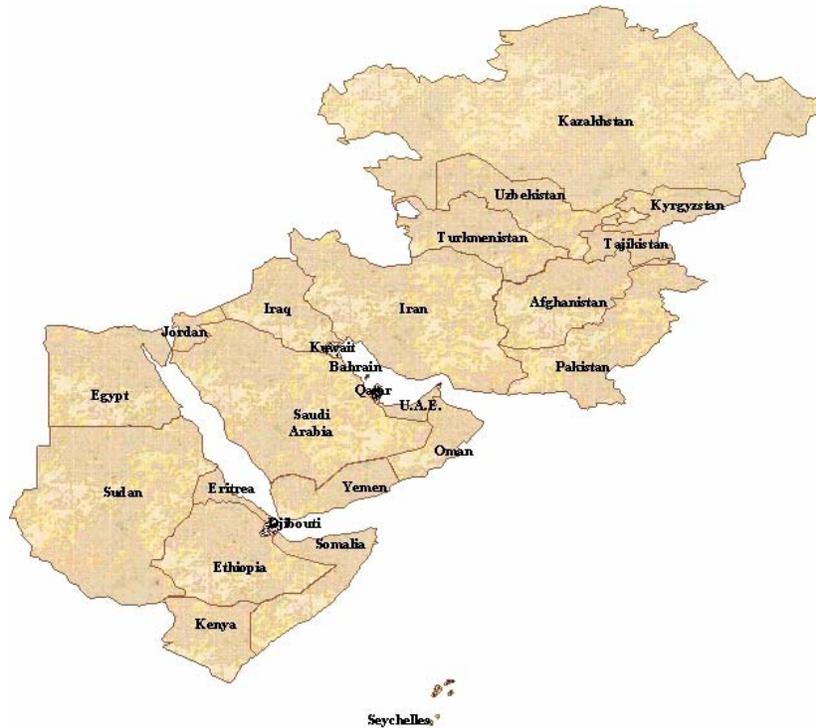
^a See also FM 3-0, *Operations* (June 2001).

different needs and shipped by air, land, or sea wherever needed. Force Provider modules have been used in the Balkans, as well as Uzbekistan and Afghanistan.^a

^a The Air Force has also developed transportable facilities for use at remote and austere locations. Harvest Eagle packages provide housekeeping sets for 550 people each, while Harvest Falcon packages provide housekeeping sets plus industrial operations and flightline sets.

The Road to War

In 2002, the mission of AMC Forward (SWA), headquartered in Doha, Qatar, was to coordinate, integrate, and synchronize all AMC activities in the U.S. Central Command (CENTCOM) AO. It served as the single point of contact for the CENTCOM and ARCENT (U.S. Army Central Command) commanders, and it promoted APS-5 readiness by directing the activities of CEB-Kuwait and CEB-Qatar.²⁶



CENTCOM's Area of Responsibility. U.S. Central Command web site.

The Army maintained land-based stocks in the Persian Gulf area following ODS/S. Considerable equipment was kept at Camp Doha, Kuwait. This equipment was considered operational stock and was used throughout the 1990s for training exercises and operations designed to deter Iraq. After Vigilant Warrior (October-December 1994), the 1st Cavalry Division (1st Cav) trained with the equipment during Vigilant Sentinel (August-December 1995). Following Desert Strike (September 1996), Kuwait agreed to a nearly continuous presence of a U.S. battalion task force, and under Operation Intrinsic Action, U.S. troops rotated to Camp Doha for four-month exercises with Kuwaiti forces.²⁷

In the fall of 1997, when Saddam Hussein blocked United Nations weapons inspectors, CENTCOM responded with Operation Desert Thunder. In addition to forces already in Kuwait, a brigade task force from 3rdID deployed from Fort Stewart. Departing from Hunter Army Airfield, the brigade task force deployed 4,000 personnel and 2,900 short tons of equipment on 120 aircraft. Within 15 hours of landing at Kuwait

*City International Airport, the unit had drawn prepositioned equipment and was in battle positions in the desert.*²⁸

Following improvements at Camp Doha in the late 1990s, the base became the standing headquarters of a brigade-size unit, with Camp Doha serving as a staging area for APS-5, providing the wherewithal for a heavy brigade-size task force, including Abrams tanks, Bradley Fighting Vehicles, Armored Personnel Carriers, Paladin howitzers, MLRS systems, bulldozers, bridge layers, trucks, and HMMWVs.



Prepositioned equipment at Camp Doha, Kuwait. U.S. Army Transportation Center and Fort Eustis, DPMO web site, "Photo Gallery."

Exercise Intrinsic Action continued as an RSOI and force-on-force exercise. RSOI is a rigorous event for soldiers who have just traveled many hours on a crowded airplane. Just hours after touching down, units account for and pick up prepositioned weapon systems, equipment, and supplies and head into the desert.

The 3rdID(M) rotated units into and out of Kuwait, first Battalion Combat Teams but, by 2002, brigade-size combat teams. The 3rd Brigade, from Fort Benning, was on rotation in the summer of 2002. The 2nd Brigade, from Fort Stewart, replaced it in September, while the 1st Brigade – last to complete the peacekeeping mission in the Balkans - ran field exercises at Fort Stewart and the National Training Center to prepare.

In 1995, CENTCOM started to work on storage facilities in Qatar, with the main base known as Camp As Sayliyah (or Saliyah). Completed in summer 2000, the three-phased program totaled more than \$110 million. It is the largest single prepositioning site for the Army in the world and places a large force of armor and support units that can be stood up quickly in response to crises in the region.²⁹

It should be noted that activities in SWA were supported and enhanced by the Combat Equipment Group-Europe, whose authorizations were reduced during the 1990s based on DA guidance and became a source of equipment fill (some 9000 items) for the afloat (APS-3) and land-based (APS-5) sets. Then, when the 173rd Brigade attacked into

Northern Iraq,^a CEG-E issued the Immediate Ready Company (IRC) from its storage location in Central Europe to reinforce the Brigade.³⁰

After the terrorist attacks of September 2001, it became obvious to Army and Coalition Land Forces Component Command (CFLCC) planners that war with Iraq was just a question of timing. After the State of the Union speech in January 2002, in which the President identified the “axis of evil,” the Army sent APS planners into SWA and began to redistribute assets from Europe into SWA and from Qatar into Kuwait. In support of the APS buildup, the Army greatly increased funding for repair parts, sustainment stocks, and operational project stocks, including critical water and POL (petroleum, oil, and lubricants) supply items.³¹

The CFLCC planners, realizing that they would not be able to stage in Saudi Arabia, began to augment existing facilities in Kuwait and to build new. The final bill came to more than \$500 million for a new airfield, fuel pipelines, improvements at Kuwaiti Naval Base (KNB), housing and warehousing at Arifjan, and various classes of supply.³²

^a In March 2003, in the largest airborne operation since World War II, soldiers of the 173rd Airborne Brigade parachuted into Northern Iraq. CEB Livorno’s skilled Italian workers and U.S. soldiers and civilians were key supporters in the successful operation.

SWA – The Organization and Buildup

For OIF, APS was a component of the AMC support to the theater, which also included LAP, LOGCAP, and, later, the Forward Repair Activities (FRAs). This LSE structure formed an integral part of the theater support structure of the 377th Theater Support Command (TSC).^a The LSE was officially established on 1 December 2001 at Camp Doha, Kuwait, to support ongoing operations in Afghanistan, Uzbekistan, and Pakistan. Initially, the LSE was a small cell of 12 personnel from CONUS that was collocated with the CFLCC C-4. An APS planning cell arrived about 1 February 2002.³³

377TH THEATER SUPPORT COMMAND (Nov 02)

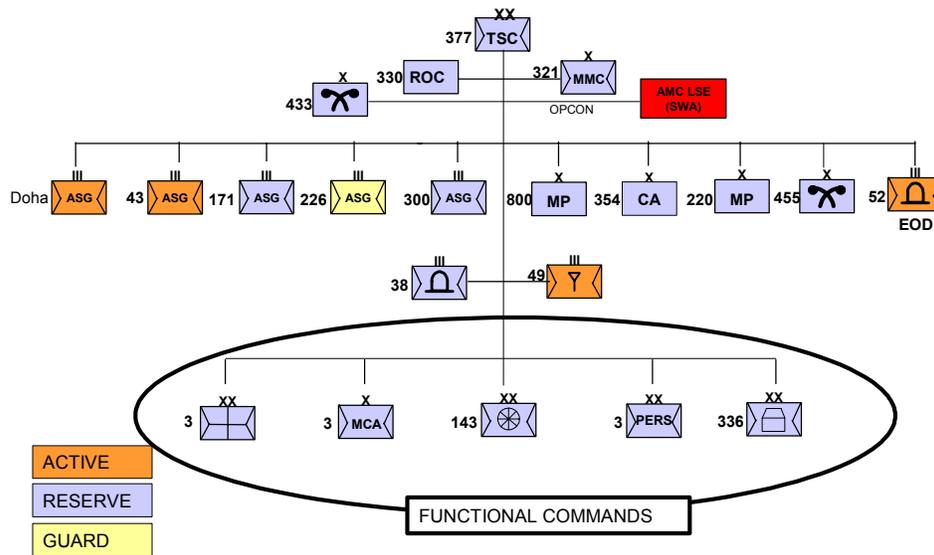


Figure shows wiring diagram for 377th TSC.

As troop formations stabilized in Central Asia, LSE Forwards were initially positioned at Karshi-Khanabad (K2), Uzbekistan; Jacobabad, Pakistan; and Bagram and Kandahar, Afghanistan. By the summer of 2002, the need for Jacobabad and K2 was

^a The 377th is an Army Reserve unit. In 1981, the 377th Corps Support Command was designated as a Theater Army Area Command. In 1998, the wartime mission expanded, and the unit designation was changed to the 377th Theater Support Command. The 377th TSC's wartime mission is to deploy with assigned units as part of a U.S. force and/or coalition force. It conducts Combat Service Support Operations for the U.S. Army and other U.S. and/or allied forces in or passing through its area of operations. Although the 377th was initially alerted for deployment to ODS/S, it was later dropped from the alert list largely because CENTCOM and ARCENT opposed its activation. Frank N. Schubert and Theresa L. Kraus, *The Whirlwind War: The United States Army in Operations Desert Shield and Desert Storm* (Washington: Center of Military History, 1995), p. 58.

lessening, as fighting had fallen off and air lines of communications had become regular. Concurrently, AMC's capabilities were increasing, and regular rotations of personnel and teams on 179-day rotations became routine. ³⁴

In Kuwait, battalion task force rotations had grown to brigade-sized task force rotations, and the requirement for personnel had increased as well. In the summer of 2002, the AMC population was around 425, including soldiers, DA civilians, and contractors. Up to and during the summer of 2002, missions of the LSE Main could be summarized as preparation of APS; execution of LAP, for example, technical expertise on the battlefield for readiness; and LOGCAP, or base services support to deployed forces. ³⁵

By July, decisions had been made at the national level to begin download of prepositioned afloat APS stocks while completing the movement of an APS combat brigade and the division base from Qatar using the USNS Watkins in Operations Vigilant Hammer I and II. In late July, Colonel Carl J. Cartwright assumed command of the LSE Main and CEG-SWA. In January of 2003, the National Command Authority began to deploy forces, and the mobilization TDA was activated. By mid-January, Brig. Gen. Boles had arrived in theater and was dual-hatted as the Deputy C-4 and the Theater AMC Commander. ³⁶



Brig. Gen. Boles, Commanding General, AMC LSE-SWA in conference room at Camp Arifjan.

By February 2003, there were three sets of equipment available in theater, apportioned to sites in Kuwait, Qatar, and Arifjan.

Kuwait. The APS-5 Kuwait fleet was maintained by Combat Equipment Battalion, Kuwait (CEB-K). This fleet was stored at Camp Doha, Kuwait, a military installation located North of Kuwait City. At this location, a 2x1 Brigade Combat Team (BCT) was garrisoned that was transformed through modifications to tables of

organization and equipment into a 2x2 BCT^a in October of 2002. In addition to a full up BCT, the site stored a Combat Support Hospital, an MLRS Battalion, a newly formed Cargo Transfer Company (CTC), and a number of Operational Project Stocks. The equipment stored at Camp Doha, unlike the remainder of the APS staged around the world, was in steady use in support of ongoing operations and exercises for CFLCC/ARCENT.³⁷



Photo by Dr. Robert G. Darius, Command Historian, U.S. Army Materiel Command.

Qatar. The APS-5 Qatar fleet was maintained by Combat Equipment Battalion–Qatar (CEB-Q). This fleet was stationed at Camp As Saliyah, Qatar, an Army prepositioning site on the outskirts of Doha, Qatar. There was also an Ammunition Storage Point (ASP) named Falcon 78 some 30km from the camp where a 2x1 BCT (-) of ammunition was stored. In October 2002, the 2x1 BCT in the APS-5 (Q) fleet was enlarged to a 2x2 BCT. In addition to the division base,^b the Aviation Brigade (less Aircraft) sustainment stocks and operational project stocks were stored at Camp As Saliyah. CEB-Q was also responsible for a Field Support Hospital stored in Bahrain.³⁸

Arifjan. The APS-3 Prepositioned Afloat, upon download, became the Combat Equipment Battalion-Arifjan Provisional (CEB-AR (P)) set. This battalion was established at Arifjan, Kuwait, in October 2002. In July 2002, the prepositioned afloat fleet had consisted of seven LMSRs, two Class V ships, and two sustainment vessels. The seven LMSRs contained a 2x2 BCT and more than 100 echelon above division Unit Identification Codes (UICs). The two Class V ships had 5,000 containers of ammunition, and the sustainment vessels contained 15 Days of Supply (DOS) for a corps, which amounted to another 3,000 containers of Class I, II, IIIp, IV, IX, and VIII supplies.³⁹

^a A 2x1 BCT consists of two armor battalions and one mechanized infantry battalion. A 2x2 BCT has two of each type battalion.

^b The division base included all the Combat Support and Combat Service Support assets required to support the division and its BCTs.

It was a “logistics war,” according to Lieutenant Colonel Ray Langlais, who helped run the main clearinghouse for equipment at Camp Arifjan, and a different one from Operation Desert Storm because much of the materiel for fighting it was prepositioned on ships at sea or in warehouses in Kuwait.



Lt. Col. Ray Langlais. Photo by Dr. Darius.

Dozens, perhaps scores of warehouses, some as big as four American football fields, stretch as far as the eye can see in the dust-blown Camp Arifjan in the southern Kuwaiti desert. Tanks and other armored vehicles huddle under half a dozen massive shelters as big as the warehouses.

At a maintenance shelter, like a giant car port 200 meters long, mechanics tooled away at tanks, armored personnel carriers, trucks and other vehicles, some installing a new transmission, others replacing a weak link in a tread. The equipment is stored here temporarily or repaired before troops match up with it and drive north to desert camps near the Iraqi border.

In neat rows outside the perimeter fence stretch hundreds of trucks and HUMVEES -- the rugged, wide-bodied vehicle that came to fame in 1991 as a replacement for the decades-old jeep. Nearby is a tent city and a landing pad for a dozen twin-rotor Chinook supply helicopters as well as a parking area for a few dozen vehicles serving the British army.⁴⁰

The use of contractors was essential to the success of this operation. They are the predominant work force for the Combat Equipment Groups. When the Qatar contractor, ITT, was asked to staff Arifjan in late September 2002, they quickly and capably relocated 40 percent (65 personnel) of the staff from Qatar to Kuwait to serve as the nucleus workforce for CEB-AR (P). Eventually, the ITT workforce grew to over 350 contractors. In addition to ITT, TAMSCO provided the communications required to run an operation of this magnitude, and Stanley provided database management.^a A government staff of approximately 34 provided oversight and quality control.⁴¹

^a ITT was responsible for receiving, staging, inspecting, and maintaining equipment, as well as for the onward movement to the gaining tactical unit. ITT was also responsible for equipment turn ins, equipment accountability, the operation of the maintenance workbench, and limited base support operations. Stanley conducted bar code scanning operations at the port during download. It performed reconciliation with Military Traffic Management Command (MTMC) as required, and maintained visibility and tracking of wholesale stocks. It tracked equipment as it arrived at Equipment Configuration and Handoff Areas (ECHAs) and conducted AWRDS queries. TAMSCO provided communication support to Stanley and ITT at the ECHA and port. It also provided secure and non-secure voice and data to CEB-AR personnel.

The LOGCAP program proved especially helpful to APS and LSE-SWA in the opening and developing of Camp Arifjan, where it built facilities for AMC personnel as well as units drawing equipment. Under LOGCAP, Kellogg, Brown, and Root provided the manpower to assemble the Force Provider modules.



LOGCAP contract workers construct facilities.

Today, the six^a Force Provider Modules and Festival Tent communities built under the LOGCAP contract provide bed-down for 15,500, and every day brings new requests,” said Joyce Taylor of AMC’s Program Management Office for LOGCAP. Force Providers come complete with water and fuel storage, power generation and distribution, and wastewater collection systems. Force Providers are containerized and pre-configured for facilitation of movement by any combination of land, air and sea. Missions for Force Providers include: theater reception; intermediate staging base; rest and refit and base camps for military operations such as humanitarian/disaster relief; and peacekeeping missions.

I believe the most important aspect of a Brown and Root Contract to construct Force Provider units is that it drastically reduces the military logistics footprint on the battlefield,” said Lt. Col. Rod Cutright, the senior LOGCAP planner for all of Southwest Asia. “We can quickly purchase building materials and hire third country nationals to perform the work. This means a small number of combat service support soldiers are needed to support this logistic aspect of building up an area.”⁴²

Combat Equipment Battalion, Camp Arifjan (CEB-AR), “Command Brief, Combat Equipment Battalion-Arifjan.”

^a The initial six packages were sent from Luxembourg. A total of 36 packages were employed.

SWA - APS for Operation Iraqi Freedom

“The value added was soldiers were able to fly over—they didn’t have to prep their equipment at Fort Stewart to get it over here. They were able to fly over, fall in on the combat systems, begin training on them right away, and get up and go to work. They didn’t have to spend untowards amounts of energy at home station getting ready to get their equipment over here. And they didn’t have to spend a lot of energy when they got here trying to get their equipment ready. They came, it was ready and they were able to go train and fight. That’s really the value added”.

Brig. Gen. Boles, CG, AMC SWA⁴³

The CEG-SWA, located at Camp As Saliyah, was the command and control headquarters for the land-based APS-5 stocks in Kuwait and Qatar. The Commander of CEG-SWA was Colonel Carl Cartwright. The CEG-A, headquartered at Charleston, SC, provided C2 for the APS-3 (Afloat), but after the download, the CEG-SWA assumed its functions.⁴⁴

For APS-5 (Kuwait), the plan was followed. Units were flown into Kuwait, and they fell in onto equipment arrayed on the storage lots at Camp Doha. After draw, units moved to the field and continued to train in their preparation for war.⁴⁵

For APS-5 (Qatar), the plan was modified. Originally, the plan had units flying into Qatar, drawing their equipment, road marching to a nearby port, combat loading on ships, and sailing to the contingency area. For this operation, CEB-Q shipped 90 percent of the stocks (two plus brigades) via a combination of vessels over a number of months to Kuwait where units were then organized and issued in similar fashion to APS-5 (Kuwait), predominantly from Camp Doha.⁴⁶

Among the vessels used in this movement was the TSV-X1 (Theater Support Vessel) *Spearhead*, a ship leased by the Army beginning in September. The TSV could carry prepo from Qatar into the shallow ports in Kuwait at speeds of up to 40 knots.⁴⁷



TSV *Spearhead*, a high-speed catamaran leased by the Army.

The *Spearhead* and a second catamaran, the *Joint Venture* (High-Speed Vessel, HSV-X1) gave the Army speed into the shallow ports carrying large cargoes while developing a strategy to procure similar ships on a permanent basis.

The plan for APS-3, although complicated to execute, was simple in concept: Sail the vessel to the contingency location, download it, configure the equipment to unit sets, and hand the equipment off to a deploying unit. In SWA, this did not happen. The theater build was gradual, and downloads were linked to political/diplomatic decisions to gradually increase the pressure on Iraq. These spaced downloads required the use of storage and maintenance capabilities at Camp Doha and eventually (due to space limitations) the creation of storage and maintenance sites at Camp Arifjan. Six of the seven LMSRs downloaded from APS-3 were stored and prepared for issue at Camp Arifjan. After units were built, they were issued for movement to their tactical locations.⁴⁸

In October and November 2001, following the terrorist events of September, CEG-SWA began limited shipping of equipment to Kuwait, such as the Inland Petroleum Distribution System (IPDS) and a portion of a BCT. In addition, CEG-E began shipping items to Qatar, including rolling stock.⁴⁹

From the spring of 2002 until January 2003, JCS/CENTCOM/DA made decisions to download APS-3. The full impact of a coming conflict was reflected when the *USNS Watkins* was downloaded in Operation Vigilant Hammer I during July 2002. The downloaded equipment was staged and handed off at Camp Doha.⁵⁰

The *Watkins* then sailed to Um Sa'id, Qatar, to conduct operation Vigilant Hammer II. This operation uploaded the remaining half of the APS-5 (Qatar) 2x2 BCT for shipment to Camp Doha, Kuwait. With the conclusion of Vigilant Hammers I and II, the preparation for and transition to war was fully underway for APS.⁵¹



The *USNS Watkins* is one of the Military Sealift Command's 19 LMSRs. It is 950 feet long, with a beam of 106 feet and speed of 24 knots. Photo by Ken Wright, National Steel and Shipbuilding Company.

AMC directed the Quality Assurance Specialist (Ammunition) Surveillance (QASAS) personnel and the Ammunition Support Team (AST) to support theater operations at the start of the download of the logistics ships. The team traveled to theater in July 2002 and downloaded the *USNS Watkins*. The team went back in September for

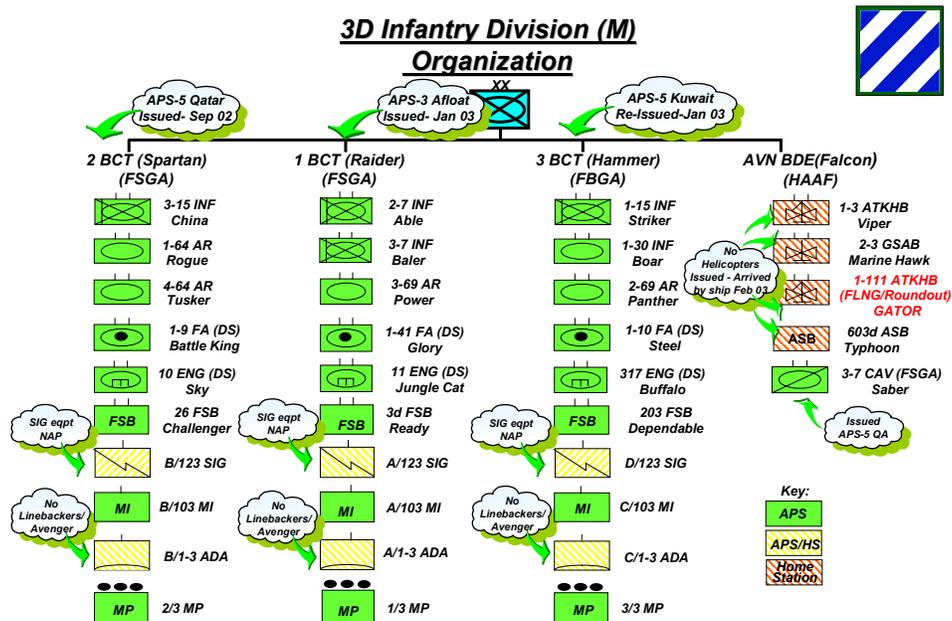
the download of the *USNS Watson*. During October, CFLCC requested that QASAS develop a plan for a Theater Support Area (TSA). Construction started on or about 20 December and was completed on or about 15 January. At that time, other services began using the area, making it a Joint Theater Support Area.⁵²

Camp Doha was physically out of storage space after the Vigilant Hammer downloads, and a decision was made in August 2002 to open Camp Arifjan, which would be used for subsequent staging of downloaded afloat equipment. Also during August, LOGCAP was deployed to Djibouti, at the Horn of Africa.⁵³

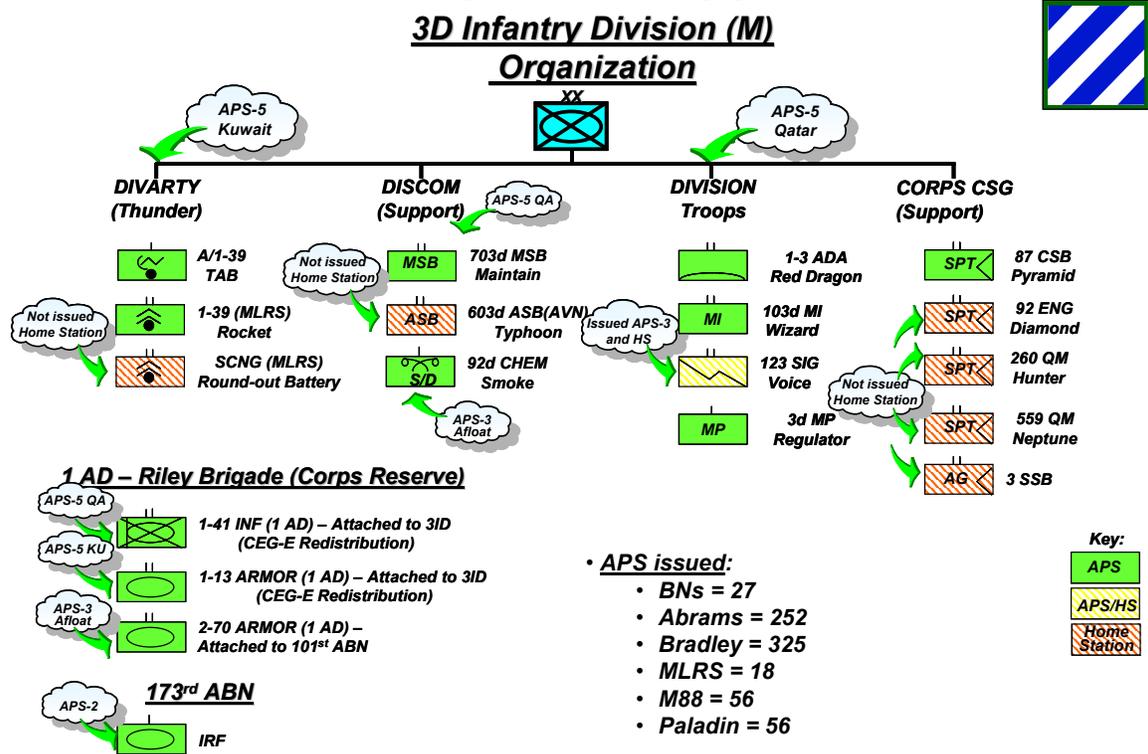
In September, it was reported that the Army had doubled the size of its stocks in Kuwait. “We have done a lot with prepositioned stocks in the Gulf, making sure they’re accessible and that they’re in the right spot to support whatever the President wants to do,” said The Honorable Thomas White, Secretary of the Army.⁵⁴

From late September to late October 2002, there was a flurry of activity at CEG-SWA and AFSC to create and resource a provisional CEB to conduct the download. This CEB eventually became Combat Equipment Battalion-Arifjan (Provisional). In short order, with the creation of CEB-AR(P), the prepositioned afloat fleet became a land based fleet. On 27 October, the *USNS Watson* completed downloading, and staging continued at Arifjan until February 2003, when the last ship was downloaded and APS issue was underway.⁵⁵

The 3rd ID(M) was rotating units. In August 2002, 3rd BCT was being relieved by the 2nd BCT. The 2nd BCT began RSOI in August 2002, with the last 1st BCT task force rotating back to CONUS in December 2002.



Charts show units of 3rd ID(M) and place of issue of equipment.⁵⁶



Starting on 6 January 2003, 3rd ID (M) began deployment of their Division and issue of the 3rd ID continued through the first week of February from Camp Doha and Camp Arifjan. APS issued a complete Division less the Aviation Brigade and some specialty equipment, predominantly Signal and Air defense assets in the combat power build. Concurrently, Echelon above Division and Echelon above Corps units were being issued from Camp Arifjan. At end state, 218 of 259 available UICs were issued. These issues encompassed 12,700 pieces of rolling stock; 124,000 components of Sets, Kits and Outfits (SKO); 119,000 pieces of Class VIII; 483,000 repair parts; 6,000 containers of supplies; 1,700 supplemental issues of sustainment stocks; and 7 operational Operational Project Stocks.⁵⁷

...Classes of Supply

Unit Basic Loads (UBLs) were a cause of concern in December 2002, and this concern continued through February 2003 due to selected shortfalls in these classes of supply throughout the theater. In December 2002, the theater was just beginning to build sustainment stocks, so UBLs were critical for initial operations. In the case of APS-3, UBLs were part of shipboard loads. For APS-5, there were no UBLs authorized, and as the theater was beginning the issue of two BCTs and the division base (a BCT equivalent), there were insufficient stocks to properly supply or sustain the surging population. AFSC had previously documented these shortcomings but had not received sufficient funding. As funds were made available, AFSC began to fill and immediately began the movement of Class II and Class IIIp from CONUS and Class IV from Europe. These stocks arrived in late February in 20-foot containers, and rather than backfilling

units, AMC LSE-SWA put these UBL stocks in the theater base as replenishment stocks. Although no one ran out, at times, some of the shortfalls were critical.⁵⁸

.....CLASS V, Ammunition Basic Loads (ABLs)

The APS Class V plan worked as anticipated with ammunition for APS and sustainment arriving from three separate locations. By the second week of February 2003, all required APS Class V stocks were available for issue.



Ammo containers aboard ship.

First, the ammunition for the Qatar fleet (BCT (-)) was stored at an ASP in Qatar referred to as Falcon 78. In September and October 2002, this ammunition was packaged into 119 20-foot containers and shipped by ground convoy and Logistics Support Vessel (LSV) from Qatar to Kuwait. Upon arrival in Kuwait, this Class V was received into the Class V TSA.

Second, the AFSC AST downloaded Class V from each of the APS-3 ships (approximately 30 containers per vessel) as the ships were downloaded and moved it onward for receipt at the Class V TSA.

Third, the two ammunition vessels, MV Carter (T-AK 4544) and MV Page (T-AK 4496) were available for offload of strategically configured and specialty ammunitions. For this operation, outstanding ammunition requirements only necessitated a partial download of the MV Carter. The AST from Rock Island, in cooperation with Military Sealift Command, Military Traffic Management Command, and theater transportation, offloaded more than 850 20-foot containers from the Carter in January-February 2003 at KNB. Offload of the MV Carter took more than 10 days due to the weather (high winds) and the resulting unfavorable sea state.⁵⁹



Ammunition download over the shore

.....Class VII

With minor exceptions, Class VII performed as predicted. The issue of 218 APS units generated the combat power and much of the theater sustainment equipment necessary for U.S. Army forces to attack successfully into Baghdad.

To fill units to their authorizations from national stocks and assets in APS-2, the Army and AMC undertook a monumental effort; however, this effort came up short in spite of APS-2 shipping some 9,000 items to the region. Primary reasons for the shortfalls included the following:

- First, APS is low on the Department of the Army Master Priority List (DAMPL), and because of limited, multi-year procurement actions, there is not enough modernized equipment to fill home station and APS sets. Systems in this category included Avengers, Bradley Fire Support Team Vehicles (FISTVs), LineBackers, and Command and Control Vehicle (C2V) systems. Units wanted to fight with this equipment, which necessitated shipment of these stocks from home station.
- Second, the focus of APS was on the fill of Equipment Readiness Code (ERC) P/A Line Item Numbers (LINs). In many cases, a unit's ERC B and C items were essential for operations. To provide full Modified Table of Organization and Equipment (MTOE) capabilities, units had to ship selected home station equipment to the theater.
- Third, there is a category of equipment classified as to accompany troops/not authorized prepositioning (TAT/NAP) that units from the start knew they would have to ship.
- Finally, in cases where units had equipment on hand in APS, they were not necessarily satisfied with the substitutes provided. Almost universally, units requested the Family of Medium Tactical Vehicles (FMTVs) but instead received M35 series and M800 series replacements. In the case of 3rd ID (M), three ships of equipment were shipped to theater to make up shortfalls. Although this sounds like a large number, 4th ID (M)--a two BCT division--required more than of 23 ships to deploy from Fort Hood.

Within Class VII, there are also two areas of special note, Operational Project Stocks and Sustainment Stocks. Together, they proved to be a valuable commodity for the theater because of the flexibility and added capability they contributed. Significantly, the IPDS Operational Project allowed the theater to build more than 200 miles of Class III (B) pipeline. The water support system (WSS) allowed for the storage and distribution of hundreds of thousands of gallons of water, and the Enemy Prisoner of War (EPW) package facilitated the internment of up to 12,000 prisoners.⁶⁰

As early as February 2003, units were requesting plus ups of their equipment, and sustainment stocks became the pool of reserves from which the theater issued. Ultimately, these stocks proved invaluable because they constituted a follow on series of APS issues that satisfied operational requirements.⁶¹

.....Class VIII (Medical)

In January of 2003, 31 personnel (military, civilian, and contractor) from USAMMA deployed as a part of the Medical Logistics Support Team (MLST) to Kuwait and established operations at Camp Doha. The MLST assumed responsibility for the preparation and transfer of all Class VIII APS materiel. Working in coordination with CEG-SWA and the CLFCC Surgeon, the MLST transferred over \$35 million dollars of hospital equipment and sets to three Combat Support Hospitals and one Field Hospital operating in direct support of combat forces. Additionally, the MLST executed the materiel transfer of over \$3.5 million of medical sets to the 3rd ID and other non-hospital units in direct support of the division. The MLST also executed the insertion of state-of-the-art medical technology to augment hospital and non-hospital units valued at over \$7 million significantly enhancing the capabilities of battlefield combat health support.

.....Class IX (ASL/PLL)

As the prologue to Operation Iraqi Freedom marched forward, actions were undertaken throughout 2002 to identify requirements and order shortages to fill Authorized Stockage Lists/Prescribed Load Lists (ASL/PLLs). At least two reviews of stocked items were conducted by representatives from HQDA, AMC, AFSC and 3rdID (M) to generate recommended changes. The base document for this review was an Optimum Storage Requirements Analysis Program (OSRAP) analysis created by Logistics Support Activity (LOGSA). This was a massive undertaking because five ASLs and more than 250 PLLs were involved. To pay for the recommended increases and changes, CFLCC allocated \$28 million of preparatory money to AMC in late December 2002. After requisitioning was complete, the Class IX was shipped to and consolidated at New Cumberland, PA. Upon arrival of the repair parts from the depots, the Class IX was segregated by UIC and shipped in more than 100 containers (for ship movement aboard the USNS Gordon (T-AKR 296) and the USNS Gilliland (T-AKR 298)) or on more than 40 463L pallets (for air movement) to the theater. The parts arrived in mid-February 2003.⁶²

The Customer – 3rdID(M)

The 3rd ID(M) began a main body force flow with two BCTs and the division troops on 1 January 2003. The last main body flight closed on 30 January 2003. According to its After Action Report for OIF, the 3rd ID(M) moved farther and faster than any other ground offensive operation in history.⁶³

Since 1996, soldiers of the 3rdID(M) have spent much time training for desert warfare in such places as California, Egypt, and Kuwait. This made a tremendous difference for the division, as soldiers knew what to expect. As MG Blount said, “The exercises that we have done, the Intrinsic Action, CCRF (CENTCOM Crisis Response Force), and Bright Star, I think all of those really add a degree of experience to our force so that you’ve got experienced people when you have to do something like this. You’ve got people that have done it before.”⁶⁴



Maj. Gen. Blount, Commander, 3rd ID, in Baghdad. John Carrington, Savannah Morning News, web site.

When Army units are designated to participate in INTRINSIC ACTION, they start a six-month journey of coordination liaison meetings with Army Central Command, Kuwait (ARCENK) and the contractor, ITT. Unit logisticians, executive and operations officers, and even commanders make three trips to APS5 Kuwait to meet with representatives from every organization involved in their deployment. Unit commanders and staffs study every phase of reception, staging, onward movement and integration (RSOI). A fourth coordination meeting is conducted when ARCENK and its representatives visit the unit at its home station to discuss final details and drawyard procedures.

When the unit finally deploys there are no surprises. The equipment draw and movement to tactical assembly areas occur within hours after arrival in country. Units participating in INTRINSIC ACTION observe the same template used by units deploying to the NTC and thus experience how they will deploy in an APS5 or TAT (to accompany troops) only scenario.

Months prior to their departure, units deploying to Kuwait or the NTC have access reams of information about equipment they will draw. However, imagine for a moment conducting the same operation from a cold start, with no coordination or detailed knowledge about the equipment prior to a notification-hour (N-hour) sequence. Add the fact that drawing APS-3 stocks is not a routine operation, but an entry in a relatively uncharted AO. In fact, APS3 has been exercised only once, in October 1994, when the 3d Brigade Combat Team of the 24th Infantry Division (Mechanized) (now the 3rdID) deployed to Southwest Asia as part of Operation Vigilant Warrior.⁶⁵

Twice in recent years, some units were deployed to Kuwait as a show of force. In the spring of 2002, the division was told to increase the size of units rotating through Kuwait for training from battalion to brigade size. The 3rd Brigade took the first rotation, followed by the 2nd Brigade in September. The division command group had been in Kuwait since May. In January, the division began to deploy.⁶⁶

The 11th Engineering Battalion, the “Jungle Cats,” received deployment orders to Kuwait on 24 December 2002. The battalion did not recall the battalion from Christmas Leave, but did recall select leaders and staff early to develop the battalion deployment operations plan (OPLAN). This provided the battalion with a deployment plan to execute when the battalion returned from block leave on 6 January 2003. Soldiers, already aware of the upcoming deployment through the national and local news media and armed with a battalion deployment plan, were thus physically executing critical deployment tasks on the day of their return to duty. January 6th began what would be the busiest two weeks of peacetime operations in the Jungle Cat’s history.



In photo at left, 3rd ID soldiers marry up with equipment. Photo by Heike Hasenauer, Soldiers Magazine.

The battalion Supply Officer tracked the vehicles and equipment that would be drawn from the Army Prepositioned Equipment System (APS) already in theater to meet our unit Modified Table of Equipment (MTOE) requirements. 11th Engineer Battalion APS draw was from APS-3. The Army was already in the process of downloading the APS-3 fleet to both Camp Doha and Arifjan, Kuwait, when the battalion received deployment orders. Equipment on our company draw grids from the APS fleet included everything from M113 Armored Personnel Carriers to Squad Carpenter Kits and DR-8 Communication Wire. However, not all of 11th Engineer Battalion's MTOE requirements were available through the APS-3 draw. Vehicles shipped to Kuwait included Armored Vehicle Launched Bridges (AVLB), Small Emplacement Excavators (SEE) and Armored Combat Earthmovers (ACE). The Unit Movement Officer from each company was responsible for ensuring vehicles and equipment were included on the Designated Equipment List (DEL), at the RMA for rail load operations, and finally placed on ships at the Port of Savannah for movement to theater. In the end, the battalion deployed to Kuwait by air and sea with some of its equipment and drew the rest out of APS staged equipment parks in Kuwait.

The advance party (ADVON) deployed on 13 January 2003, splitting much of the battalion's leadership between Fort Stewart and Kuwait. The ADVON accomplished critical missions that eased the battalion's transition into theater. The battalion Supply Officer and the company executive officers coordinated the APS draw sites at Arifjan and Doha in Kuwait. The battalion anticipated drawing all equipment from Doha, but the sheer amount of units moving into the theater dictated that some companies would draw from Arifjan. The ADVON OIC (Officer in Charge) also established a foothold in Camp Pennsylvania for the battalion. Camp Pennsylvania, located in the northern Kuwaiti desert became the temporary home to the Jungle Cats and the rest of 1st BCT for most of our stay in Kuwait.

As the main body of the Battalion began to deploy, soldiers usually received a manifest and flight time approximately 48 hours prior to flying out. Soldiers reported to their companies six hours prior to manifest for weapons draw and final goodbyes to friends and family. No flight from Fort Stewart to Kuwait was a direct flight. The aircraft landed for brief layovers in Shannon, Ireland, to refuel and allow soldiers to stretch their legs. The soldiers wearing Desert Camouflage Uniform (DCU) walking through the terminal drew questions and curious looks from civilians. From Ireland it was on to Kuwait International Airport.

Once in Kuwait each Company had six hours to draw their vehicles from the APS-3 fleet and move towards Camp Pennsylvania. Line Companies drew their entire MTOE from the APS-3 fleet, minus equipment shipped

from Fort Stewart. The Battalion found that the equipment drawn at Doha and Arifjan was in excellent shape, and well maintained by the civilian contractors. Some vehicles, such as HMMWVs and HEMMTs (Heavy Expanded Mobility Tactical Trucks) were newer than the vehicles left at Ft. Stewart. Most of the equipment drawn had fewer miles or operating hours. A few vehicles, such as 2½-ton and 5-ton trucks were a downgrade from the brand new vehicles the Battalion had received within the past year. The remainder of the Jungle Cat's equipment arrived on ship to Kuwait in early February, and the vehicle operators spent several days at the port downloading the SEEs, Maintenance Contact Trucks, and the additional AVLBs and ACEs.

Once the companies had completed the draw process, they immediately moved out for Camp Pennsylvania, a three-hour trip from Arifjan and a little over an hour from Doha during daylight and with an escort. The Jungle Cat's new home was a circular spot in the desert surrounded by a four-mile long perimeter of 10-foot tall tank berms and several rows of concertina wire.⁶⁷

The 3rdID(M), in its rapid deployment, left some of its best equipment at home, including Bradleys with advanced laser-targeting systems.⁶⁸ One officer commented, "We got trucks here that are brand new, and we've got trucks that are older than the drivers driving them."⁶⁹ A veteran said, "It's unbelievable. Some of the trucks I drew out of prepositioned stocks when we arrived are the same stuff I turned in back in '91."⁷⁰

A support operations officer complained that, although the unit had conducted several scrubs of the draw and the DEL prior to deployment, the APS grid set did not reflect the equipment listing that was expected. He wrote that it took eight additional supplemental draws from APS to get the battalion all the equipment necessary.⁷¹

There was also the issue of high expectations. As an officer with one of the LSE-Forwards explained: "They set the bar so high. We were expected to be like a rental car agency. You know, cars come from a rental car lot and work perfectly. Well, this is 20- and 30-year old equipment and designs that are 30 and 40 years old. And this equipment sits on a boat. Things break."⁷²

In Maj. Gen. Blount's view, it balanced out. "None of that was a surprise. I mean that's what we planned for as a general rule. We knew what was supposed to be in APS, and we knew some of our stuff at Fort Stewart was newer. The trucks were older, but across the board, everything was in good shape. Where there was a radical difference in capability, we would draw stuff from Fort Stewart. Like we brought our Linebackers for our air defense systems. And we had time to adjust and teach people how to drive with the clutches as we needed to. If you know it, you can train for it."⁷³

Transition

With the end of decisive combat operations on 1 May 03, the AMC LSE-SWA transitioned to theater sustainment functions. Key areas included: LOGCAP contracts were greatly expanded, APS transitioned to turn in of redeploying units, and APS issues were now conducted to improve readiness by replacing combat losses and filling units up to their authorized wartime levels.



Retrograde

APS turn-in was conducted exclusively at Arifjan. Home station equipment was directed to Camp Doha. This decision was made to provide clearly delineated lines for the preparation and shipment of home station equipment and segregation of APS equipment for reset. As units were redeployed from Iraq on a call forward basis, they were directed to Redeployment Assembly Areas (RAAs) in Kuwait to download secondary loads of consumable supplies (ABLs/UBLs/PLLs/ASLs), begin cleaning, and to segregate/purify equipment sets by UIC. Based on call forwards, APS units then road marched or were transported by Heavy Equipment Transports (HETs) to Arifjan for a final “four corners” downloading, staging, call forward to the wash racks, movement to an AMC SKO/BII (basic issue item) turn-in point, followed by a verification inspection of condition code, relief from accountability, and finally staging in a five kilometer by two kilometer area located immediately south of Arifjan. The turn-in standard was complete “as is”.⁷⁴

U.S. Marine Corps Experience

The Marines started the Maritime Prepositioning Force Program in 1979 to provide readily available, heavy, fast-transit sealift. MPF became fully operational in 1985, and MPF ships delivered the first tanks for the 7th Marine Expeditionary Battalion during ODS/S. By 1996, the program consisted of three squadrons comprised of 13 Military Sealift Command ships stationed in the Mediterranean Sea, the western Pacific, and the Indian Ocean. The program supports ground combat and combat support equipment and 30 days of sustainment for three Marine Corps air-ground task forces (MAGTFs) of about 18,530 Marines each. Scheduled inventory and maintenance of equipment on these ships is performed at Blount Island, near Jacksonville, FL.⁷⁵

During OIF, the attack to capture and liberate Tikrit was the culmination of an assault by a reinforced Marine Expeditionary Force that lasted 26 days.⁷⁶ To support this operation, the Marines off-loaded two squadrons of MPF, 11 ships in 16 days. The equipment came off Squadrons 1 and 2, with readiness ratings of 98 percent and 99 percent respectively. Whereas the Army maximized the use of contractors in performing the off-load and maintenance, the Marines used organizational Marine and Navy personnel.⁷⁷ The following table shows the totals for ground equipment –⁷⁸

M1A1 Main Battle Tanks	120
M198 howitzers	63
Amphibious assault vehicles	226
Light Armored Vehicles	50
Engineering/Materials	472
Handling Equipment (MHE)	
Rolling stock	3517
Water purification units	85
Generators	1098
Days of sustainment	30

After the end of combat operations, the Marines immediately began to assess the condition of the equipment and to reconstitute the force. According to General William L. Nyland, Assistant Commandant of the Marine Corps, “Returning our operating and MPF equipment to full mission capability is one of our highest priorities.” The equipment going to reconstitute MPF losses is being pulled from assets left behind by deploying units and global war reserve stocks. Noting that it would take time to return the MPF program to pre-deployment capability, Nyland explained that the Marines were taking advantage of the constitution process to transform the MPF through the implementation of the Maritime Prepositioning Ship Realignment Plan. This plan shifts several ships among the prepositioned squadrons in order to achieve enhanced capability and interoperability in support of deliberate and contingency plans. Nyland further noted that the Marines were using many assets from the Norway Air-Landed Marine Expeditionary Brigade (NALMEB) Prepositioning Program in the reset of the MPF.⁷⁹



Two U.S. Marines guide the driver of an M1A1 Abrams tank into a staging area after the tank was off-loaded from an MPF ship at a port in Kuwait in January 2003. Photo by Staff Sergeant Bill Lisbon. Official Photo Archive, U.S. Marine Corps.⁸⁰

The Way Ahead

APS worked in OIF. The soldiers of the 3rd ID (M) flowed into Kuwait by air and linked up with their prepositioned equipment, drew it, and moved into camps in the desert for training before launching into Iraq. The ability of the U.S. to fight from a “running start” may have surprised the Iraqis who may have expected the U.S. to build an “overwhelming force” before attacking as it had done in ODS/S.⁸¹

“We drew tanks in Udairi. They were excellent; best I have ever seen! If we had used our tanks from Fort Benning, we would have lost the war.”

Staff Sergeant Michael Brouillard, Alpha Troop, 3-7 Cavalry
Fontenot and Degen, On Point

Many factors contributed to this success, especially time, money, and innovation. Certainly the investments in strategic lift paid off, as the LMSRs carried larger loads faster, but leasing the TSV provided a major boost, too, enabling the Army to move materiel into the shallow ports of Kuwait very quickly.

Overall, the U.S. made good use of time. In the 12 years since ODS/S, the Army spent a lot of time training, training at NTC and training in the deserts of Egypt and Kuwait. Thus, U.S. troops were familiar with desert fighting and with the concept of prepositioning, both as “stagers” and as “drawers.” That is, APS managers had practiced maintaining, staging, and handing-off equipment, just as warfighters had practiced drawing equipment and going to fight.

“Training at the National Training Center is as close to what we just did, it’s closer than what you would believe it could be. From the way you flow into the theater of Krasnovia, to drawing the prepositioned set out, to dealing with the contractors, to establishing all the information nodes that you have to do to build/track the combat power. Down to the car bomb that we use down in the Dust Bowl. The national training center is as close a model to what happened up here as exists. You take the Krasnovians and call them Iraqis and away you go.”

LTC Joe Merlo, Commander, 3rd ID LSE

^a

The U.S. had been able to plan its prepositioning and to build storage facilities in Kuwait and Qatar. Then the Army was able to move materiel from Qatar into Kuwait and to open the major new facilities at Camp Arifjan. Using these prepositioned stocks gave the 3rd ID(M) troops extra time for training in the Kuwaiti desert.

^a Randy Talbot, Historian, AMC LSE-SWA, “Oral History Interview with LTC Joe Merlo, Commander, 3rd ID(M) LSE.”

Much of this time for training and build up was made possible by the hospitable or permissive environment. Denied access by Saudi Arabia and by Turkey, the U.S. still enjoyed friendly relations with Kuwait and Qatar, which facilitated the planning, buildup, and staging.

The APS strategy benefited from other factors, as well. Specifically, the “dividend” of equipment – both left in SWA following ODS/S and stockpiled in Europe – enabled the Army to develop and redistribute the stocks maintained on the ground in Kuwait and Qatar and on board ships at Diego Garcia. In addition, contracting and facility innovations such as LOGCAP and Force Provider greatly increased the capabilities of AMC LSE-SWA in the managing of APS and the providing quality of life.

As it RESETs and develops the Future Force, the Army must build on its advantages and address various problems. For one thing, there is no “dividend” of equipment in either Europe or SWA to be re-distributed, as there was after ODS/S. In addition, the equipment turned in has been fought and worked very hard. For another, there is no guarantee that the U.S. will have so much time to plan and build such support infrastructure, or that there will be friendly nations that will permit and facilitate such buildup. Besides, a future adversary may attempt to disrupt or deny such access and buildup. Thus, there are at least two primary problem areas – no “dividend” of equipment and no assurance of access.

As it looks to the future, the Army will be operating as part of the Joint Force. Prior to OIF, Lieutenant General David McKiernan, CG, Third Army and CFLCC asserted, “There will never be a Third Army fight. We will always be in a combined and joint context.”⁸² During OIF, AMC LSE-SWA supported all services and components of the coalition. In the years ahead, AMC must help “expand the Joint Force commander’s ability to rapidly deploy, employ, and sustain forces throughout the global battlespace in any environment and against any opponent.”⁸³

For APS planners, one of the major issues is location: where do you place your stocks, and the associated question: how do you configure them? AMC is designing APS to support “transition to Win Decisively^a without an operational pause, pending arrival of CONUS-based surge fleet.”⁸⁴ To accomplish this, one proposal calls for maintaining land-based stocks in Europe, SWA, and Northeast Asia (NEA), with afloat stocks organized into three regional flotillas – one in the Mediterranean, one at Diego Garcia, and one at Guam. CS/CSS/ammunition theater opening assets would be included in all Army Regional Flotilla (ARF) sites. In fact, the Setting the Force initiative has already begun with reconfiguration of APS in NEA and establishment of ARF1 in Guam.⁸⁵

Maintaining equipment on board vessels will remain a struggle. It may be necessary to shorten shipboard cycles and to add a download exercise to sea rotations.⁸⁶

^a Current (2004) U.S. Defense Strategy is – Conduct one Global War on Terrorism; Deter four critical areas (Europe, SWA, NEA, East Asia); Conduct two nearly concurrent Swiftly Defeat the Enemy operations; and Win Decisively in one region.

In fact, in a recent report, the U.S. General Accounting Office noted that Marines practiced with their stocks and suggested that the Army “could benefit from training on how to unload, prepare, and support prepositioned stocks, particularly afloat stocks.”⁸⁷

Then, there is the related issue of configuration and the need for modular or tailored packages to meet the broad range of support requirements. For example, one expert suggests that some of the ships in the afloat fleets be configured for “ambiguous” deployment. These stocks would be packed for rapid off-load and rapid employment, i.e., soldiers could “drive off the ramp” and prepare for immediate engagement. Most of the ships would still be packed for unambiguous deployment, in which a contractor force would off-load and stage in a hospitable environment under military supervision.⁸⁸

We are hamstrung by the lack of an organizational construct that focuses on joint theater-opening tasks.

U.S. Army Deputy Chief of Staff for Logistics, G-4, Army Logistics White Paper
Delivering Materiel Readiness to the Army
December 2004

The “manning” issue is especially important to AMC. Currently, the LSE is a cadre TDA with a battle roster roundout. That is, the force that goes into theater to manage APS consists of the cadre from the AMC Forward greatly expanded by augmentees or fillers composed of designated emergency essential DA civilians, volunteers, and contractors. This almost ad hoc scenario can disrupt ongoing operations as people are pulled from or volunteer from regular routines.⁸⁹ Now, one of AMC’s strategic objectives is to “Design Logistics Support Elements to support Army units of action and units of employment.”⁹⁰

Timing is also a factor. Logistics support units are low in the TPFDD, creating confusion. During OIF, the Reserve Component identified as the Theater Support Command (TSC) arrived after the AMC LSE and most of the 3rd ID(M), complicating equipment draw.⁹¹ One answer would be to deploy the logistics C2 early with a flexible theater-opening package.

The Army must design an integrated theater-opening capability that can deploy on the same timeline as its combat forces and, immediately upon entry, execute critical sustaining tasks. . . Improved force reception enables the combat force to focus on the combat mission, while a single logistics C2 element focuses on joint force integration.

AUSA Torchbearer National Security Report,
“The New Paradigm: Bringing U.S. Army Logistics into the 21st Century”
(April 2004)

One concept under consideration within DoD, the Sustainment Support Activity (SSA) Afloat, is to provide supplies and equipment from sea-based maintenance and warehouse capability. During OIF, denial of access by Saudi Arabia and the refusal of

Turkey to permit transit by the 4th ID into northern Iraq highlighted the need to ensure access when and where needed. In August 2003, the Defense Science Board endorsed the sea base concept, calling it a “critical joint military capability” that should be supported by all services.⁹²

The Navy has adopted Sea Basing as one of the three fundamental concepts underlying Sea Power 21, and Sea Basing is also one of the Marine Corps’ principal enabling concepts supporting its expeditionary strategies.⁹³

Sea-basing may be the long-term solution. Perhaps the Army should also develop what one observer describes as “a self-deployment capability for forces engaged in forcible- and early-entry operations.” These would include multifunction sustainment packages that do not rely on strategic airlift or sealift for movement.⁹⁴

The GAO report poses another huge consideration – affordability. The drawdown of forces, especially in Europe, made ample materiel available to fill prepositioned stocks. However, as equipment is modernized, transformed, and recapitalized, it may not be practical to buy essentially two sets of equipment – one for home station and one for prepositioning.⁹⁵

So the logistician’s principal function continues. Resetting and transforming even while supporting the on-going fight, the logistician must anticipate the warfighter’s needs and deliver the necessary equipment and supplies. Prepositioned stocks, whether land- or sea-based, will be crucial elements enabling the Future Force.

As GEN Paul J. Kern, CG, AMC recently said, “We must implement new joint doctrine based on a distribution-based logistics system that delivers combat power with uninterrupted momentum. We must have enablers in APS or ensure the early arrival of the enablers to conduct effective RSOI. In the future, we need to bypass such potential choke points as airfields and ports and deliver directly to joint forces via multiple entry points.”⁹⁶

Glossary

ABL	Ammunition Basic Load
ABS	Automated Battlebook System
ACE	Armored Combat Earthmover
ADVON	advanced party
AFSC	U.S. Army Field Support Command
AMC-LSE	Army Materiel Command, Logistics Support Element
AMC-SWA	Army Materiel Command, Southwest Asia
AO	Area of Operations
APS	Army Prepositioned Stock
ARCENT	U.S. Army Central Command
ARF	Army Regional Flotilla
ASL/PLL	Authorized Stockage List/Prescribed Load List
ASMP	Army Strategic Mobility Program
ASP	Ammunition Storage Point
AST	Ammunition Support Team
AVLB	Armored Vehicle Launched Bridge
AWR	Army War Reserve
AWRDS	Army War Reserve Deployment System
BCT	Brigade Combat Team
BII	Basic Issue Item
C2	Command and Control
C2V	Command and Control Vehicle
CCRF	CENTCOM Crisis Response Force
CCSS	Commodity Command Standard System
CEB	Combat Equipment Battalion
CEB-AR	Combat Equipment Battalion, Arifjan
CEB-K	Combat Equipment Battalion, Kuwait
CEB-Q	Combat Equipment Battalion, Qatar
CEG	Combat Equipment Group
CEG-A	Combat Equipment Group, Afloat
CEG-E	Combat Equipment Group, Europe
CEG-SWA	Combat Equipment Group, Southwest Asia
CENTCOM	U.S. Forces Central Command
CFLCC	Coalition Forces Land Component Command
CG	Commanding General
CINC	Commander-in-Chief
COCOM	Combatant Commander
CONUS	Continental United States
CS	Combat Support
CSS	Combat Service Support
CTA	Common Table of Allowances
CTC	Cargo Transfer Company
DA	Department of Army
DAMPL	Department of the Army Master Priority List

DCU	Desert Camouflage Uniform
DEL	Designated Equipment List
DESCOM	U.S. Army Depot Systems Command
DoD	Department of Defense
DOS	days of supply
DPMO	Deployment Process Modernization Office
EAC	Echelon Above Corps
ECHA	Equipment Configuration and Handoff Area
EPW	Enemy Prisoner of War
ERC	Equipment Readiness Code
FISTV	Fire Support Team Vehicle
FMC	Fully Mission Capable
FMTV	Family of Medium Tactical Vehicles
FORSCOM	U.S. Army Forces Command
FRA	Forward Repair Activities
HEMMT	Heavy Expanded Mobility Tactical Trucks
HET	Heavy Equipment Transports
HMMWV	High Mobility Multipurpose Wheeled Vehicle
HNS	Host Nation Support
IOC	U.S. Army Industrial Operations Command
IPDS	Inland Petroleum Distribution System
IRC	Immediate Ready Company
JCS	Joint Chiefs of Staff
K2	Karshi-Khanabad, Uzbekistan
KNB	Kuwaiti Naval Base
LAP	Logistics Assistance Program
LIN	Line Item Number
LMP	Logistics Modernization Program
LMSR	Large, Medium-Speed Roll-on/Roll-off Ships
LOGCAP	Logistics Civilian Augmentation Program
LOGSA	Logistics Support Activity
LSE	Logistics Support Element
LSV	Logistics Support Vessel
MAGTF	Marine Corps air-ground task force
MEB	Marine Expeditionary Battalion
MHE	Materials Handling Equipment
MLRS	Multiple Launch Rocket System
MLST	Medical Logistics Support Team
MPF	Marine Prepositioning Force
MRE	Meals Ready to Eat
MSC	Major Subordinate Command
MTMC	Military Traffic Management Command
MTOE	Modified Table of Organization and Equipment
NALMEB	Norway Air-Landed Marine Expeditionary Brigade
NAP	Not Authorized Prepositioning
NEA	Northeast Asia

N-hour	Notification-hour
NTC	National Training Center
ODS	Operation Desert Shield
ODS/S	Operation Desert Shield/Storm
OIC	Officer in Charge
OIF	Operation Iraqi Freedom
OPLAN	Operations Plan
OSD	Office of the Secretary of Defense
OSRAP	Optimum Storage Requirements Analysis Program
OTSG	Office of the Surgeon General
POL	petroleum, oil, and lubricants
POMCUS	Prepositioning of Materiel Configured to Unit Sets
QASAS	Quality Assurance Specialist (Ammunition) Surveillance
RAA	Redeployment Assembly Area
REFORGER	Return of Forces to Germany
RF	radio frequency
ROK	Republic of Korea
RSOI	Reception, Staging, Onward Movement, and Integration
SDS	Standard Depot System
SEE	Small Emplacement Excavators
SKO	Sets, Kits, and Outfits
SSA	Sustainment Support Activity
SWA	Southwest Asia
TAT	To Accompany Troops
TDA	Tables of Distribution and Allowances
TOE	Table of Organization and Equipment
TPFD	Time-Phased Force Deployment
TPFDD	Time-Phased Force Deployment Data
TRU/ARPS	Theater Reserve in Unit Sets/Army Readiness Package, South
TSA	Theater Support Area
TSC	Theater Support Command
TSV	Theater Support Vessel
UBL	Unit Basic Load
UIC	Unit Identification Code
USAMMA	U.S. Army Medical Materiel Agency
WRSA	War Reserve Stocks for Allies
WSS	water support system

End Notes

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- ¹ Colonel Gregory Fontenot, U.S. Army, Retired, Lieutenant Colonel E. J. Degen, and Lieutenant Colonel David Tohn, *On Point, US Army in Operation Iraqi Freedom* (Fort Leavenworth, KA: Combat Studies Institute Press, 2004), pp. xxvi and 86.
- ² AMC LSE-SWA, “Oral History Interviews with BG Vincent E. Boles, Commanding General, Army Materiel Command, South West Asia (AMC-SWA), Deputy C-4, Coalition Forces Land Component Command (CFLCC), 19 Jan 2003 – 24 June 2003,” prepared by Randy R. Talbot, June 2003, p. 3.
- ³ Jack Kelly, “How the Bold Run to Baghdad Paid Off,” *Pittsburgh Post-Gazette* (April 13, 2003), web site; Chris Wattie, “U.S. General’s Gamble Wins Him Baghdad,” *National Post* (April 10, 2003, globalsecurity.org web site.
- ⁴ U.S. Army Materiel Command History Office (AMCHO), “Oral History Interview with Major General Buford Blount, Assistant Deputy Chief of Staff, G-3, Former Commanding General 3rd ID (Mechanized), “ December 10, 2003.
- ⁵ U.S. Army Materiel Command, Brief, “Equipping the Warfighter: Operation Iraqi Freedom, From Fuel Bags to Batteries to Bombs” (July 2003).
- ⁶ U.S. Congress, Congressional Budget Office, *Moving U.S. Forces: Options for Strategic Mobility* (February 1997), web site, citing U.S. Department of Defense, Joint Chiefs of Staff, *Mobility Requirements Study*, vol. 1, *Executive Summary* (January 1992), p. ES-4.
- ⁷ Lieutenant Colonel Michael S. Tucker, “Army Pre-positioned Stocks,” *Military Review* (May-June 2000), web site.
- ⁸ Major General Fred E. Elam and Lieutenant Colonel Mark Henderson, “The Army’s Strategic Mobility Plan,” *Army Logistician* (May-June 1992), pp. 2-6; Major Christopher L. Johnson, “Strategic Mobility in Support of a CONUS-based Army,” *CSC* (1997), web site; Kim A. Richards, “Prepo Afloat: Key to Power Projection,” *Army Logistician* (January-February 1998), pp. 24-26.
- ⁹ Johnson, “Strategic Mobility” (1997).
- ¹⁰ Congressional Budget Office, *Moving U.S. Forces*.
- ¹¹ Sydney J. Freedberg, Jr., “Military Puts War Preparations in High Gear,” *GovExec.com* (October 7, 2002); U.S. Department of the Army, FM-100-17-2, *Army Pre-positioned Land* (16 February 1999), web site.
- ¹² Freedberg, “Military Outs War Preparations.”
- ¹³ Congressional Budget Office, *Moving U.S. Forces*.
- ¹⁴ Asian Pacific Defense Forum, Summer 2002, “RSOI/Foal Eagle 2002, Korean-U.S. Forces Enhance the Defense of Korea in Exercise,” web site.
- ¹⁵ DA, FM 100-17-2, *Army Pre-positioned Land* (1999).
- ¹⁶ DA, FM 100-17-3 *Reception, Staging, Onward Movement, and Integration*, (17 March 1999), p. 1-1.
- ¹⁷ *Ibid.*, pp. 1-3 and 1-4.

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- ¹⁸ *Ibid.*, pp. 1-4 and 1-5.
- ¹⁹ DA, FM 100-17-2, *Army Pre-positioned Land* (1999); U.S. Army Deputy Chief of Staff for Operations and Plans, G-3 (DAMO-FMF), Brief, "Operational Projects Review."
- ²⁰ U.S. Army Materiel Command Logistic Support Element, South West Asia, *AMC LSE-SWA: We Will Not Falter, We Will Not Fail, Operation Iraqi Freedom, Phases I-III* (U.S. Army Field Support Command History Office, September 2003), p. 34-35
- ²¹ U.S. Army Forces Command FORSCOM Regulation 700-2, *FORSCOM Standing Logistics Instructions* (1 December 1999), para 1-1, Purpose.
- ²² U.S. Army Field Support Command, web site, "History."
- ²³ U.S. Army Transportation Center and Fort Eustis, Deployment Process Modernization Office (DPMO), "Army Prepositioned Stocks (APS)," from web site.
- ²⁴ *Op. Cit.*
- ²⁵ U.S. Army Logistics Management College (ALMC), *Theater Logistics Handbook, 2003*, chapter 19, "Logistics Augmentation," from web site.
- ²⁶ GlobalSecurity.org, "Army Materiel Command-Fwd-SWA, Combat Equipment Group-Southwest Asia."
- ²⁷ GlobalSecurity.org, "Exercise Intrinsic Action;" David Isenberg, "By Infinite Moonlight, U.S. Readies for War," *Asia Times On-line* (August 29, 2002).
- ²⁸ Third United States Army, web site, "History."
- ²⁹ GlobalSecurity.org, various articles.
- ³⁰ AMC LSE-SWA, *We Will Not Falter*, p. 30.
- ³¹ Fontenot, Degen, and Tohn, *On Point*, p. 29; also AFSC/JMC, "Army Field Support Command Support to Operation Iraqi Freedom, Phases I-III," p. 9.
- ³² *Ibid.*, 32.
- ³³ AMC LSE-SWA, *We Will Not Falter*, p. 29.
- ³⁴ *Ibid.*, p. 6
- ³⁵ *Ibid.*, p. 8.
- ³⁶ *Ibid.*, p. 8.
- ³⁷ *Ibid.*, p. 35.
- ³⁸ *Ibid.*, pp. 36-37.
- ³⁹ *Ibid.*, p. 38.
- ⁴⁰ Lachlan Carmichael, "U.S. Fights 'Logistics War' as It Prepares for Possible Invasion of Iraq" *Agence France Presse* (February 22, 2003), web site.

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- ⁴¹ AMC LSE-SWA, *We Will Not Falter*, p.51.
- ⁴² Bob Whistine, AMC-LSE Public Affairs Officer, “Tent Cities Spring Up All Over Kuwait.”
- ⁴³ AMC LSE-SWA, “Oral History Interviews with BG Vincent E. Boles,” p. 3.
- ⁴⁴ AMC LSE-SWA, *We Will Not Falter*,” p. 34.
- ⁴⁵ *Op. Cit.*
- ⁴⁶ *Op. Cit.*
- ⁴⁷ Matthew Cox, “Army Seeks More Ways to Get to the Fight,” Army Times (October 6, 2003), p. 32.
- ⁴⁸ AMC LSE-SWA, *We Will Not Falter*,” p. 34.
- ⁴⁹ *Ibid.*, p. 40.
- ⁵⁰ *Op. Cit.*
- ⁵¹ *Op. Cit.*
- ⁵² AMC LSE-SWA, *We Will Not Falter*,” pp. 91-92.
- ⁵³ *Ibid.*, p. 40.
- ⁵⁴ TCM Breaking News, “U.S. Doubles War Stocks in Kuwait” (September 6, 2002, web site.
- ⁵⁵ AMC LSE-SWA, *We Will Not Falter*,” p. 41.
- ⁵⁶ Sal Morretta and David Pagano, LMI, Briefing for MG McManus, “AMC-SWA Support of Operation Iraqi Freedom” (21 August 2003).
- ⁵⁷ AMC LSE-SWA, *We Will Not Falter*,” p. 41.
- ⁵⁸ *Ibid.*, p. 43.
- ⁵⁹ *Ibid.*, p. 44.
- ⁶⁰ *Ibid.*, p. 45.
- ⁶¹ *Ibid.*, p. 47
- ⁶² *Ibid.*, p. 48.
- ⁶³ U.S. Army Third Infantry Division (Mechanized), After Action Report: Operation Iraqi Freedom (U.S. Army Center for Army Lessons Learned, we site).
- ⁶⁴ AMCHO, “Oral History Interview with Maj. Gen. Buford Blount.”
- ⁶⁵ Tucker, “Army Pre-positioned Stocks.”
- ⁶⁶ Noelle Phillips, “Analysis: Perfect Warriors for this War,” Savannah Now, we site.
- ⁶⁷ 11th Engineer Battalion, “Engineering the Victory: Pre-deployment,” web site.

-
- ⁶⁸ Peter Baker and Susan B. Glasser, "Technology Puts U.S. Troops on Higher Ground," Washington Post (21 January 2003), posted on web site for U.S. Army Space and Missile Defense, Colorado Springs, CO.
- ⁶⁹ Sean D. Naylor, "3rd Infantry Division Moves Closer to Iraq-Kuwait Border," Military City.com (March 19, 2003).
- ⁷⁰ Brown, "Old Weapons," Philly.com.
- ⁷¹ LTG Charles S. Mahan, Army G-4, email, dated May 13, 2003, subject: 3ID AAR Comments.
- ⁷² Historian, AMC LSE-SWA, "Oral History Interview Conducted with LTC Joe Merlo, Commander 3rdID LSE" (23 May 2003).
- ⁷³ AMCHO, "Oral History Interview with Major General Buford Blount."
- ⁷⁴ AMC LSE-SWA, *We Will Not Falter*, p. 52.
- ⁷⁵ U.S. Department of Defense, Office of the Inspector General, *Evaluation Report: Equipment Pre-positioned Afloat* (Report Number 97-054, December 1996), p. 3.
- ⁷⁶ U.S. Congress, House of Representatives, House Armed Services Committee, Statement by General William L. Nyland, Assistant Commandant of the Marine Corps, before the Subcommittee on Military Readiness (October 21, 2003), web site.
- ⁷⁷ LMI, brief, "APS-MPS Operational Comparison."
- ⁷⁸ "Marine Corps Logistics Observations from OEF/OIF," LOGTECH Observation Seminar (28-29 October 2003), web site.
- ⁷⁹ House Armed Services Committee, Statement by General Nyland," web site.
- ⁸⁰ Sergeant Colin Wyers, "I MEF Conducts MPF Offload" Marine Corps News (January 17, 2003), web site.
- ⁸¹ Fontenot, Degen, and Tohn, *On Point*, p. 86.
- ⁸² *Ibid.*, p. 31.
- ⁸³ U.S. Army, "Our Army at War . . . Relevant & Ready, Moving from the Current Force to the Future Force . . . NOW" (brochure).
- ⁸⁴ AMC Brief, "Army Prepositioned Stocks (APS) Program Overview, 2 Dec 2003."
- ⁸⁵ GEN Paul Kern, "Balancing the Army for the Joint Force Commander" (Presentation, Winter 2004 AUSA Symposium, March 2004).
- ⁸⁶ AFSC/JMC, "Army Field Support Command Support," p. 29.
- ⁸⁷ U.S. General Accounting Office, *Military Prepositioning, Observations on Army and Marine Corps Programs during Operation Iraqi Freedom and Beyond*, Testimony before the Subcommittee on Readiness, Committee on Armed Services, House of Representatives (GAO 04 562T, March 24, 2004), pp. 6 and 14.

⁸⁸ Command Historian, U.S. Army Field Support Command, “Major General Wade H. McManus, Jr., Commanding General, U.S. Army Field Support Command, Oral History Interview” (February 2004), pp. 18-19.

⁸⁹ *Ibid.*, p. 10.

⁹⁰ AMC, *The Army Materiel Command Strategy* (March 2004).

⁹¹ AMCHO, “Oral History Interview with Maj. Gen. Buford Blount.”

⁹² Sandra I. Erwin, “Military Bases at Sea, No Longer Unthinkable” National Defense Magazine (January 2004), www.nationaldefensemagazine.org.

⁹³ Major Henry B. Cook, MSARNG, “Sea Basing and Maritime Pre-Positioning,” *Army Logistician* (May-June 2004), p. 36.

⁹⁴ COL Larry D. Harmon, “Asymmetric Sustainment, The Army’s Future” Army Logistician (July-August 2003), p. 41.

⁹⁵ GAO, *Military Prepositioning*, p. 2.

⁹⁶ GEN Paul Kern, “Balancing the Army.”