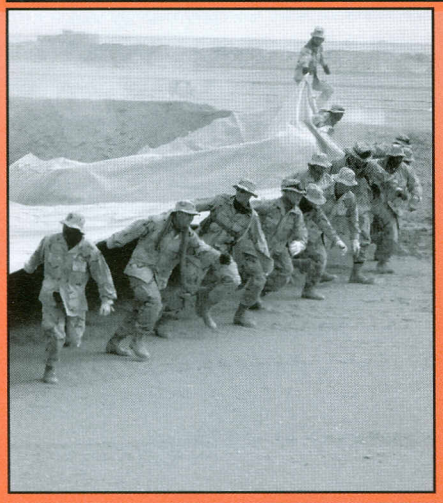
Quartermaster

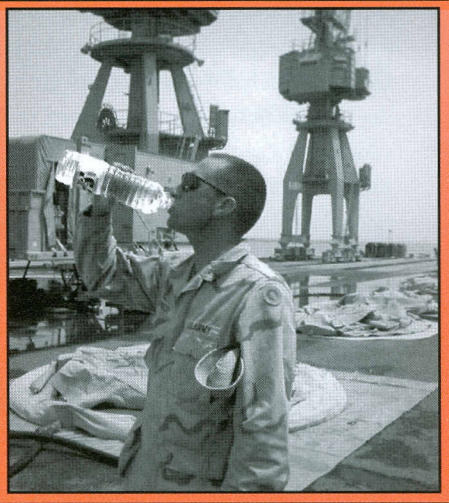
PROFESSIONAL BULLETIN

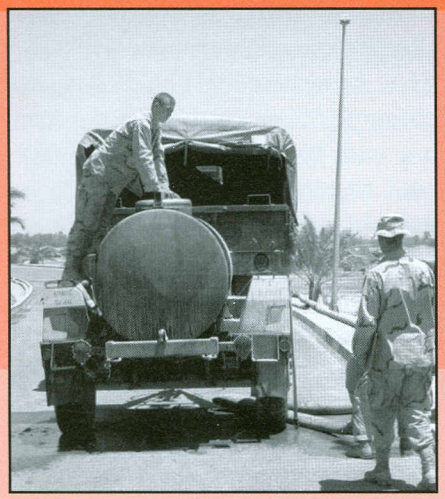
AUTUMN 2003 PB 10-03-3

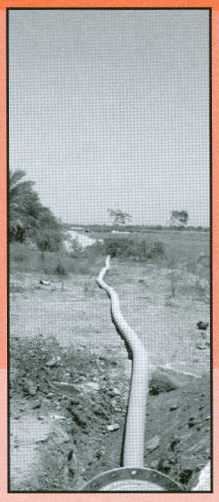
WARFIGHTERS' LOGISTICIAN



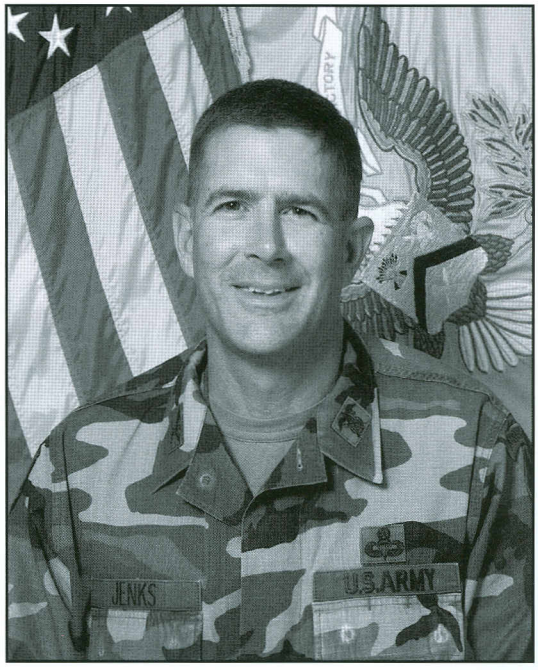
Fuel and Water Missions in Iraq







From the Acting Quartermaster General



Colonel William A. Jenks

Greetings, fellow Quartermasters. It is a great honor to represent The Quartermaster General while he is deployed. As you may know, Brigadier General Scott G. West was selected to be the J4 (Logistics), Combined Joint Task Force Seven in Iraq. There is no logistician better prepared to fill that role as we continue *Operation Iraqi Freedom*. BG West is a warrior; he is making a difference every day and contributing significantly to the support of our soldiers, sailors, airmen and marines. This duty gives BG West the opportunity to see the caliber of our Quartermaster soldiers and assess their training. I can tell you he is impressed with the dedication, motivation and abilities of our young men and women as they support our Army in the harsh, desert environment where they are operating. Quartermaster soldiers are performing in an outstanding manner, setting new standards and validating the challenging training they receive here at the US Army Quartermaster Center and School, Fort Lee, VA. No mission is too tough, and a can-do attitude is pervasive throughout our Corps.

Quartermaster soldiers continue to deploy and support all the units participating in current operations around the globe. Recent data shows more than 40 percent of the forces deployed today are combat service support (CSS) soldiers. Currently, Quartermaster soldiers comprise the largest percentage of CSS soldiers deployed. They are a vital part of current operations and will play a significant role in future operations as well. We will continue to answer the call and provide the field with exceptional support.

Recently, I attended the Supply Excellence Award ceremonies where we recognized some of the finest logisticians in our Corps. Congratulations to all the winners! This year 55 units and 26 individuals were recognized for logistical readiness and supply effectiveness. I am continually amazed at the high degree of excellence displayed by the soldiers of the Quartermaster Corps. I also visited the Quartermaster officers in the current Command and General Staff College class at Fort Leavenworth, KS, and again the high quality of our officer corps is impressive. As our future leaders, these officers display a degree of enthusiasm and motivation that is unparalleled in our Army today. Their dedication bodes well for the future of our Corps.

The Quartermaster Corps is presently going through a functional review. This review will look at US Army Reserve, Army National Guard and active duty Quartermaster positions throughout the Army. The final review with the Army G1 (Personnel) is scheduled for this March. The functional review is our opportunity to look at our structure and recommend changes. Be assured we will do all we can to shape the Quartermaster Corps with the right numbers and the right people in order to ensure success on the battlefield today and in the future. We look forward to hearing from you regarding any personnel issues. Please send your issues to the Chief, Office of the Quartermaster General at Gary.R.Grimes@lee.army.mil, (804) 734-4178 or DSN 687-4178.

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Quartermaster
PROFESSIONAL BULLETIN

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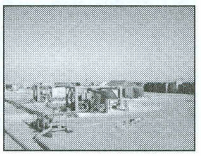

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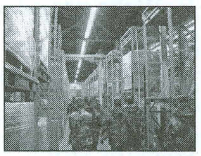

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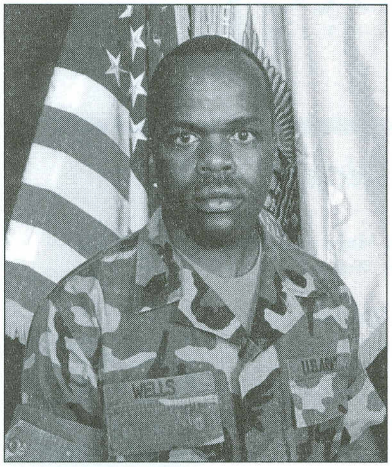
INSIDE BACK COVER: The full pages on battalion-size units that Keith K. Fukumitsu, Quartermaster, has researched and illustrated for each edition since 1991 now are archived on the Quartermaster Home Page under Professional Bulletin, Quartermaster Unit Lineages, at www.quartermaster.army.mil.



Honorary Regimental Sergeant Major Change of Responsibility

Command Sergeant Major Don E. Wells

On 11 September 2003 in a ceremony held at the Logistics Memorial at Fort Lee, VA, Command Sergeant Major (Retired) Julius Small Jr. succeeded Command Sergeant Major Milton B. Hazzard as the 5th Honorary Sergeant Major of the Regiment. The Acting Regimental Command Sergeant Major Don E. Wells presided over the ceremony.

When the Quartermaster Corps joined the US Army Regimental System on 13 June 1986, Army General Order Nine established the Quartermaster Regiment and named Fort Lee as the Corps' regimental home. Upon activation, 210,000 Active, Reserve and National Guard soldiers throughout the world became affiliated with the Quartermaster Regiment. The Quartermaster General commands the regiment. The Quartermaster Command Sergeant Major serves as the Regimental Sergeant Major. The Chief, Office of the Quartermaster General, serves as the Regimental Adjutant. Distinguished retirees serve as the Honorary Colonel of the Regiment and the Honorary Sergeant Major of the Regiment. They provide a link between the past and the present, perpetuating the history, customs and traditions of the regiment.

Throughout Command Sergeant Major Small's 34 years of active duty, he served with pride, honor and distinction as a Quartermaster. His military career included eight tours throughout the Continental United States, three tours in Korea, two tours in Germany, and one tour in Vietnam and Belgium. His awards and decorations include the Legion of Merit (one oak leaf cluster) and the Bronze Star.

CSM (Retired) Julius Small Jr.

Upon completion of the Sergeants Major Academy at Fort Bliss, TX, followed by one year as a First Sergeant at Fort Lee, he attained the rank of Command Sergeant Major and upheld the standards as a Quartermaster Command Sergeant Major for the next 12 years until his retirement at Fort McPherson, GA, as the Post Command Sergeant Major.

None of his accomplishments stand out more than his selection as the first Commandant of the Quartermaster Corps' Noncommissioned Officer Academy (NCOA). The foundation he established at the NCOA in 1987 reflects on all Quartermasters who attend the NCOA. Since his retirement in 1993, he has continued to play a major role as a Quartermaster employed as the Installation Property Book Officer for Information Technology Equipment, Deputy Chief of Staff for Command, Control, Communications and Computers, US Army Forces Command, Fort Gillem, GA.

Command Sergeant Major Small currently serves as a Distinguished Member of the Quartermaster Regiment. His selection as the 5th Honorary Sergeant Major of the Regiment is a small tribute to a veteran soldier and respected leader with more than 34 years of service in the Quartermaster Corps. *(Continued on Page 4)*

Transforming Warrant Officer Education

Chief Warrant Officer Five James C. Tolbert

Greetings from Fort Lee and the "Home of the Quartermaster Corps." In the previous issue of the *Quartermaster Professional Bulletin*, there were five articles authored by Quartermaster Warrant Officers. (To read these articles online, go to www.quartermaster.army.mil, Professional Bulletin, Summer 2003 edition.) These articles represented a wide range of topics from warrant officer professional development to *a perspective* on current operations in Iraq. This reaffirms the reality that Quartermaster Warrant Officers operate across the full spectrum of operations and are truly regarded as the Army's technical experts.

As the nation battles global terrorism both here and abroad, the Army will continue to transform into the Objective Force of the 21st Century. Transforming is occurring each day as the Army continues to design, develop and employ key systems to support the "warfighter." Warrant officers have and will continue to play integral roles in the Army's ongoing transformation initiatives.

Here at the US Army Quartermaster Center and School, work has begun to transform Quartermaster Warrant Officer education and professional development systems. These changes will enable Quartermaster Warrant Officers to operate better on the full spectrum battlefield of the future. To achieve this, Quartermaster leadership has set forth initiatives to train Quartermaster Warrant Officers earlier and more often while facilitating a shared training environment throughout their careers. The Army Training and Leader Development Panel (ATLDP) study ignited transformation and improvement of warrant officer professional development. One of the ATLDP initiatives recommends including the professional development of warrant officers within the existing DA Pamphlet 600-3 (Commissioned Officer Development and Career Management). The Quartermaster submission to DA Pamphlet 600-3 accomplished that task while forging ahead with bold initiatives to improve future warrant officer professional development.

At odds is the current Warrant Officer Education System (WOES) model that offers training to warrant officers only after selection for promotion to the next higher grade. This system commonly referred to the "select – train – utilize" model trains only those warrant officers who are selected for promotion. The Objective Force Army will demand a warrant officer corps that is sufficiently trained in their areas of expertise while able to operate and survive on the battlefield using their innate "warrior skills." The current warrant officer professional development model is not the "way ahead" to transformation.

Specifically, warrant officer professional development must be transformed to include a process to train warrant officers earlier than the current model which provides training only after selection to CW3, CW4 and CW5. Currently, no training is offered to CW2s, while an eight-year training gap between W01 and CW3 exists. Subsequent training after selection to CW4 is offered between the warrant officer's 12th and 13th year of warrant officer service and between 17 and 18 years of warrant officer service after

selection to CW5. The "warfighter" will continue to expect warrant officers to fill critical roles in operating and maintaining key Army systems. We must create and sustain a world-class education system that provides warrant officers with up-to-date technical education while fostering an environment that is accessible and current.

Revised Training Model

A revised WOES model must include training for CW2s before their consideration for promotion to CW3, thus eliminating the huge disparity in training at the junior level. This requirement must be repeated for each grade up to CW5 where warrant officers would attend required and frequent training before selection to the next higher grade. In essence, the system creates a requirement to attend WOES courses before consideration for promotion to the next higher grade. The result is training offered to warrant officers on the average four years earlier than currently offered. This new WOES model would be synchronized with the proposed Officer Education System (OES) model, where it creates the oportunity for more shared training between OES and WOES officers - another ATLDP recommendation.

Training warrant officers earlier and more often has to remain on the forefront of priorities as the Army transforms to the Objective Force. The Army will continue to expect warrant officers to manage the technical systems now and into the future. To ensure warrant officers can operate on the future battlefield, arming them with the necessary tools for success begins with transforming the WOES framework.

CW5 James C. Tolbert is currently assigned to the Office of the Quartermaster General, US Army Quartermaster Center and School (USAQMC&S), Fort Lee, Virginia, as the Quartermaster Warrant Officer Proponent. He has served in a variety of assignments worldwide. These include Battalion Supply Technician, 223d Aviation Battalion, Schwaebisch Hall, Germany; and Property Book Officer, 26th Signal Battalion, Heilbronn, Germany, where he deployed to Saudi Arabia during Operations Desert Shield/Storm in December 1990. Also, he served as a Property Book Team Chief and later Chief, Asset Visibility Section, Division Materiel Management Center, 4th Infantry Division, Fort Carson, Colorado; Property Book Officer, US Army Central Command, Camp Doha, Kuwait; Instructor/Writer, USAQMC&S, Fort Lee, Virginia; and Personnel Career Management Officer assigned to the US Total Army Personnel Command, Alexandria, Virginia. He has completed every level of the Warrant Officer Education System and holds a master's degree in logistics systems management from Colorado Technical University at Colorado Springs.

(Continued From Page 2)

To view the previous Quartermaster Honorary Sergeants Major of the Regiment, go to the Quartermaster Home Page at http://www.quartermaster.army.mil/qm-csm/QM3-HonorarySergeantsMajor.html.

Command Sergeant Major Don E. Wells is currently serving as the Acting Regimental Command Sergeant Major for the US Army Quartermaster Center and School, Fort Lee, Virginia. His previous assignments include Company A, 5th Battalion, Fort Knox, Kentucky; 2/92 Field Artillery Battalion, Gissen, Germany; Region Personnel Center Company, Gissen, Germany; Headquarters and Headquarters Company (HHC), 4th Battalion, Fort Lee; Headquarters, 2d Region, Criminal Investigation Division, Seckheim, Germany; 503d Transportation Company, Heidelberg, Germany; 649th Engineer Battalion, Schweinfurt, Germany; HHC, Third Army, Fort McPherson, Georgia; 200th Quartermaster Company, Fort Drum, New York; Company A, US Army Sergeants Major Academy, Fort Bliss, Texas; HHC, 503d Forward Support Battalion, Republic of Korea; National Guard Bureau, Pentagon, Washington, DC; HHC, 123d Main Support Battalion, Dixhiem, Germany (Bosnia); HHC, 266th Quartermaster Battalion; 23d Quartermaster Brigade; and Commandant of the Quartermaster Noncommissioned Officer Academy, Fort Lee. His military education includes the Sergeants Major Academy, Senior Supply Sergeant Course, Noncommissioned Officer Logistics Course, Advanced Noncommissioned Officer Course, and the Standard Property Book System Course. He has a liberal arts degree.

Operation Iraqi Freedom *Bulk Petroleum Distribution – 'Proud To Serve' Style*

MSG Gary L. Parsons

The Quartermaster Corps and the Corps of Engineers work together on the battlefield to establish pipelines to move large quantities of fuel in the theater and corps rear areas. Engineers design and construct the pipeline for the Inland Petroleum Distribution System (IPDS) based on logistical requirements, while Quartermasters establish the tactical petroleum terminals that store and issue the fuel. After Engineers have tested and certified the IPDS, Quartermasters take over operation and control of the pipeline.

In every conflict, military forces face challenges with keeping warfighters supplied. The 240th Quartermaster Battalion, Petroleum Pipeline and Terminal Operating (PPTO), used innovative solutions to meet the challenges of keeping fuel flowing daily during *Operation Enduring Freedom* and then in *Operation Iraqi Freedom*. During various phases associated with construction and operation of more than 200 miles of pipeline, 20 pump stations and 17 million gallons of tactical fuel storage in tactical petroleum terminals (TPTs), the battalion performed many missions without published doctrinal guidance on tactics, techniques and procedures.

Doctrinally, the mission of the 240th Quartermaster Battalion (PPTO) is providing command and control of units assigned or attached to operate and maintain a military fuel distribution system. Quartermasters with the 77F (Fuel Supply Specialist) military occupational specialty (MOS) train to operate the IPDS to perform the battalion's wartime mission. The IPDS consists of both commercially available and standard military petroleum equipment. Bulk petroleum can be supplied over-the-shore by the US Navy or from local sources. The fuel then moves inland via a pipeline system and pump stations to TPTs. Fuel stored in the TPTs goes into tanker trucks or continues to move forward through the pipeline. The Army resources a single PPTO company to operate 90 miles of pipeline, 6 pump stations, and 1 TPT.

The 240th Quartermaster Battalion's operation of the IPDS is the cornerstone of the theater Class III bulk petroleum distribution system supporting coalition military forces today in Iraq and Kuwait.

In this aerial photograph of the largest tactical petroleum terminal (TPT) system in military history, the bermed pipeline in the upper left corner extends into Iraq. At the bottom of the photograph is the 109th Quartermaster Company's life support area.

Photographs by Chaplain (CPT) Chul W. Kim

To the more than 2,000 soldiers assigned during various phases of the buildup and war in Iraq, the battalion's motto *Proud to Serve* was the mantra for providing more than 100 million gallons of fuel to coalition forces by doing "whatever it takes" legitimately and safely to overcome obstacles. From the first days of deployment to support *Operation Enduring Freedom* early in 2003 to the sustainment phases of *Operation Iraqi Freedom* in late April and May 2003, the battalion's mission unfolded in three major phases: prewar support, war support and sustainment operations. During all phases, the battalion constantly adjusted to the mission to meet support requirements. During the 240th Quartermaster Battalion's first five months of deployment to Southwest Asia, soldiers concentrated on operating or moving IPDS pipeline and terminals.

Quartermaster leadership conducts quality assurance on pump station manifolding.

Phase I: Prewar Support

Tactical Petroleum Terminals. To meet the theater bulk petroleum stockage objective for the war, millions of gallons of fuel were stored in a series of TPTs. A platoon of soldiers from the 240th Quartermaster Battalion that had deployed in March 2002 to Camp Virginia in northern Kuwait received an "on order" mission to construct the base terminal of the IPDS. In Autumn 2002, the deployed platoon started constructing this terminal that was complete when the battalion deployed in January 2003. Immediately upon deployment, the battalion was given the mission to command and control the organic platoon and seven medium truck companies (POL - petroleum, oils and lubricants). This was just one part of the overall mission to provide bulk fuel transportation, as well as storage, distribution and quality surveillance support to the theater of operations through command and control of units operating the IPDS and a mobile petroleum laboratory.

A second TPT was constructed in early February 2003 across a major highway from the Al Amadi refinery, south of Kuwait City, to meet growing fuel demands and to serve as the backup fuel source to the IPDS during military operations in Iraq. This second TPT received fuel directly from an Al Amadi refinery pipeline and was dubbed the "Truck Fill Stand" because this TPT became the primary location for trucks to load fuel. The "Truck Fill Stand" quickly became a very busy terminal when the Kuwait City International Airport fuel terminal discontinued support to US forces. The "Truck Fill Stand" became the primary source of fuel for refueling the Transportation Command's aircraft at the Kuwait airport. The "Truck Fill Stand" also supported Camps Arifjan and Doha with bulk JP8 fuel and was the primary terminal supporting 7,500-gallon (7.5K) tankers that eventually augmented the IPDS by moving fuel into Iraq after the start of the war.

About the same time the "Truck Fill Stand" became operational, the 240th Quartermaster Battalion's petroleum operations section coordinated with officials from the local Kuwaiti oil industry for the battalion to control a commercial pipeline between two Kuwaiti refineries, two airbases and the Camp Virginia TPT. In February 2003, the battalion assembled a short length of IPDS pipeline from the commercial line to Camp Virginia and started dispatching the pipeline. This pipeline greatly reduced the number of trucks needed to haul fuel to the Camp Virginia TPT and allowed the truck companies a short break for some much-needed maintenance, before the war.

The operation of a commercial pipeline was a first for the battalion. Coordinating this effort required innovative thinking to control the civilians operating the pumps and valves for the commercial pipeline and the US Air Force personnel controlling the incoming fuel to the two airbases. The battalion

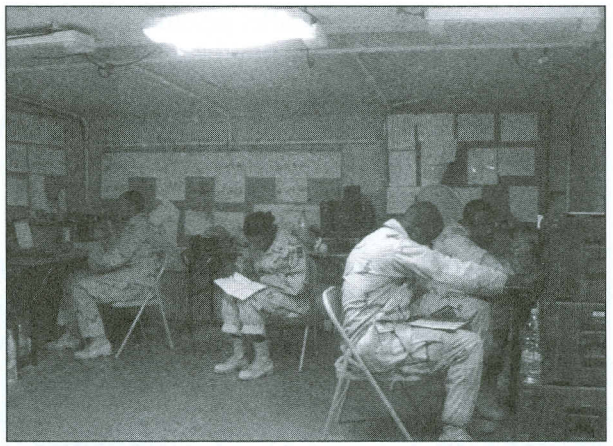
petroleum operations section developed easy standing operating procedures and demanded good communications to ensure success of the first length of the pipeline. The cellular telephone proved the most reliable means of communication for the commercial pipeline. This again was another first - dispatching the pipeline by cellular telephone.

In mid-February, the now deployed 267th Quartermaster Company built a third 2-million-gallon TPT in Kuwait. This task was especially difficult because the company had very little equipment to use. Their equipment was still enroute. The 267th Quartermaster Company also expanded the Virginia TPT with more bulk fuel tank assemblies (BFTAs).

The battalion then pooled resources to build a fourth TPT at the Kuwait/Iraq border at a location known as Breach Point West, the largest ever built. Since each BFTA weighs 1.5 tons, emplacement of collapsible fabric fuel tanks and berm liners required extensive manpower.

The battalion once again used innovative solutions to ready the huge Breach Point West TPT because there was no assigned company on hand. The 109th Quartermaster Company advance party of 15 soldiers directed the TPT construction. The battalion pooled resources from all of its units, neighboring Marine Corps units, Army Engineers, and a water platoon waiting for a follow-on mission. The BFTA collapsible fuel tanks immediately went into service once on the ground. Tactical fuel truck drivers delivering fuel were directed to help with remaining construction while awaiting their return starting point (SP) time by filling sand bags or assisting wherever required. The battalion provided hot meals to Marines in exchange for their labor. The Marines were more than helpful with the TPT construction, as they preferred the hot food to packaged Meals, Ready To Eat (MREs) three times a day.

In the face of blinding sandstorms, manpower shortages and austere living conditions, extraordinary team effort enabled completing the terminal and filling it with fuel ahead of schedule. The Breach Point West TPT is a testimony to the battalion's officer and noncommissioned officer (NCO) leadership that saw the tough mission through to the finish. At this point in the operation, the battalion's unofficial motto was born: *Whatever It Takes*.



The 240th Quartermaster Battalion's Petroleum Operations Section dispatches fuel through the IPDS by using redundant communications. Quartermasters also use commercial cell phones and satellite phones for isolated locations.

Transportation

The transportation requirement to move the International Standards Organization (ISO) containers to the right place for the initial and subsequent phases of the operation was an enormous achievement. The pipeline companies lack sufficient modification table of equipment (MTOE) materials handling equipment (MHE) to move all the necessary containers. Each TPT requires 101 containers of equipment. The entire pipeline and terminal operation requires 1,400 IPDS 20-foot ISO containers. At no time in petroleum history have this many containers been used to move a petroleum system. One battalion NCO and officer managed and tracked all of these containers to their ultimate destinations. This was not an easy task. The 77F soldiers are trained neither on container contents nor on which sets of containers support which missions. The battalion had a quick course on container inventories and rapidly learned the transportation business to move all the containers to the right place at the right time.

Pipeline Construction

The final stage of the prewar preparation included assembly and operation of more than 100 miles of connective IPDS pipeline. This pipeline design was another first for the battalion because the

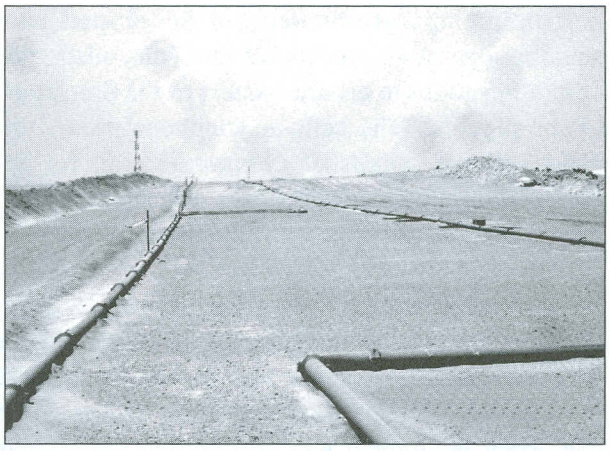
IPDS was actually two parallel pipelines running to the Iraqi border. This pipeline segment required 5 pump stations per pipeline or 10 pump stations. These 10 pump stations were operated by the 267th Quartermaster Company that doctrinally operates only up to six pump stations.

Another first was the actual tactical design of pump stations. No published tactics, technique and procedures outline what "right" looks like for a tactical pump station. Once again, creative NCOs designed a tactical pump station complete with a six-foot berm surrounding the pump station, a SCUD missile bunker, field latrines, fighting positions built into the perimeter berm and enough concertina wire to make the pump stations look like "mini-Fort Knox"! The tactical pump station's design had to be correct, as the next pump stations were to be built in Iraq where the threat against US targets greatly increased.

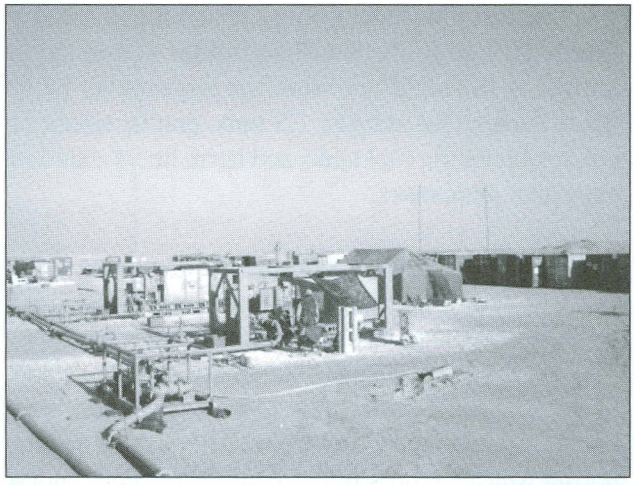
The battalion also created a nondoctrinal method to flush and pressure-test the pipeline. Since the IPDS construction occurred during major sandstorms, soldiers assumed that a great deal of sand went inside the pipeline, which proved an accurate assumption. In order to flush the system, the battalion coordinated for more than 600,000 gallons of water to flush, fill and pressure-test each IPDS segment. This was a first. The published technique for pressure testing involves 3,000 gallons of water followed by fuel. The battalion was reluctant to use fuel because of the potential for mixing fuel and sand in the IPDS and also the potential of environmental risks associated with a pipeline break during pressure-testing. The battalion's method of water-testing the IPDS was subsequently used for all pipeline flushing, filling and testing.

Fuel Quality

One major challenge during Phase I: Prewar Support was injecting the Jet A1 fuel received from the refineries to make JP8 fuel for military use. The fuel was injected at Camp Virginia and the "Truck Fill Stand" south of Kuwait City, the initial point of receipt of the refinery fuel. Each TPT was responsible for ensuring proper injection and storing only fuel that met the fuel specifications for JP8. The injectors were manifolded into the existing switching manifold



Parallel Pipeline for the Inland Petroleum Distribution System (IPDS) in Camp Udari to the Breach Point West Segment



Isolated Tactical Pump Station Along the IPDS

at each terminal. The Jet A1 is injected with Corrosion Inhibitor (CI), Fuel System Icing Inhibitor (FSII) and Static Dissipative Additive (SDA) to make JP8. Three soldiers had oversight of this huge mission to continually monitor these hazardous materials, ensure a readily available fuel supply and the correct rates for the fuel additives. More than 60,000 gallons of FSII and 7,000 gallons each of CI and SDA were injected for the first 50 million gallons of fuel issued by the battalion.

RSO&I

Finally, during the initial prewar phase, the battalion provided reception, staging, onward movement and integration (RSO&I) of more than 20 diverse companies. Since the 240th Quartermaster Battalion was the only battalion under

49th Quartermaster Group command - until just one week before the war in Iraq - the 240th was tasked with the RSO&I mission for all units falling under the 49th Quartermaster Group. Therefore, the 240th Quartermaster Battalion was assigned POL truck companies, petroleum supply companies and pipeline units, as well as water units. One week before the war, the 260th Quartermaster Battalion arrived, and all the truck units were assigned to the "new" battalion. After the war started, a command and control element of the 559th Quartermaster Battalion deployed into theater and took command and control of all the water units. The RSO&I mission was an immense undertaking as the 240th battalion command and staff logistically, administratively and mentally prepared more than 2,000 soldiers for war.

Phase II: War Support

The battalion was ready for Phase II when the war started on 20 Mar 03. The battalion had all the collapsible fuel tanks at the four TPTs topped off, and all the truck/tanker systems were topped off before they went to the 260th Quartermaster Battalion. The Breach Point West TPT at the Iraqi border stayed busy during the initial days of the war since this terminal was closest to the fight. The TFS also stayed busy topping off 7,500-gallon tankers as they completed round trips into Iraq traveling the 6-lane highway of Main Supply Route Tampa from Kuwait City to Logistics Support Area (LSA) Cedar in the vicinity of An Nasariya, Iraq. The 110th Quartermaster Company had emplaced a fuel system supply point (FSSP) at LSA Cedar in the first several days of the war. A storage facility, the fifth TPT in the theater, was also constructed and operated by the 110th Quartermaster Company. The fifth TPT soon replaced the FSSP at LSA Cedar. The IPDS then caught up with the Cedar TPT with 78 additional miles of pipeline and 7 additional pump stations. With lessons learned from Phase I, the second pipeline and terminal phase was up and running, bringing fuel closer to the warfighter.

Phase III: Sustainment Operations

Shaping for Sustainment. As operational plans drove sustainment in Phase III, Quartermasters had assumed control of about 170 miles of IPDS pipeline. At the peak point of capacity, Quartermasters were responsible for moving more than 200 million gallons of fuel, 135 million gallons through the commercial pipeline and more than 65 million through the IPDS. When major hostilities subsided, the commercial pipeline in Kuwait was extended to Camp Udari, ending the need for IPDS pipeline between Camps Virginia and Udari. The IPDS pipeline was therefore shortened to about 140 miles. The battalion's storage capacity was lowered, with the downsizing of several fuel tank farms.

Soldiers from the 267th Quartermaster Company (Petroleum Pipeline and Terminal Operating) employ a berm liner at Camp Udari for one collapsible fabric fuel tank.

Communication Challenges. The major constraint in Phase III involved communication issues between the pump stations and dispatch headquarters. The Army's Harris HF radios proved difficult to use during nighttime hours due to atmospheric conditions. Cellular phones were no longer an option because Iraq had no compatible cellular phone network. Another first: using HF and AM communications and relaying information to dispatch the pipeline.

Leapfrogging and Equipment Harvesting. Phase III also included another first for the IPDS – "leapfrogging." In order to improve fuel support to the forward combat forces, the "leapfrogging" technique was used to better leverage bulk fuel storage and distribution assets. To prepare for the move of pipeline and pump stations, Quartermasters decommissioned two parallel 15-mile segments in Kuwait by pushing the fuel out of the line with water.

This action freed up the needed pipeline and pump stations for the Army Engineers to extend the pipeline past LSA Cedar to the vicinity of Tallil Air Base in Iraq. The Engineers picked up and moved the required IPDS equipment north, and pipeline companies shifted accordingly to operate their new stations. The battalion now had three pipeline companies assigned, the 267th, 109th and 19th Quartermaster Companies, and one petroleum supply company, the 110th Quartermaster Company. This final phase of the pipeline brought the IPDS once again to 170 miles in length.

The leapfrogging also included terminals. Camp Virginia and Breach Point West TPTs were downsized to reuse equipment for LSA Cedar II, located near Tallil Air Base. The original LSA Cedar was decommissioned. One of the challenges was picking up fragile fabric fuel tanks, berm liners, and assorted equipment from one site and moving the equipment efficiently and carefully. These moves were made with organic equipment, such as stake and platform trailers, because repacking containers for the move did not make logistical sense. Also, outside transportation assets were slim. The Army's transportation priorities were supporting the warfighters in Iraq.

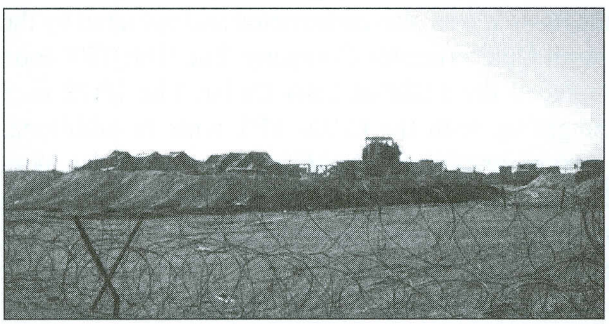
Fuel and Water Combination

One final innovative idea for the last section of pipeline was finding a water source for the final filling and testing of the last length of pipeline. In the desert, water is a rare commodity. The theater's available water distribution equipment was heavily tasked to support many other requirements. Army water tankers were not available to transport water for the IPDS pipeline in Iraq, so the battalion requested a water purification unit to first draw and purify water from a local Iraqi irrigation canal and then use the Tactical Water Distribution System (TWDS) to supply water for the IPDS flushing, filling and testing. The TWDS connected to the IPDS pipeline, and water was pumped in reverse through the IPDS pipeline to fill BFTAs with water for the testing. This unconventional, innovative idea proved very successful.

During operations supporting the prewar and war phases of *Operation Iraqi Freedom*, the *Proud To Serve* battalion used innovation to develop tactics, techniques and procedures to effectively operate the IPDS equipment. Also, the 240th Quartermaster Battalion learned many lessons along the way to apply to future operations.

At Logistics Support Area Cedar II, the head terminal and most northern point of IPDS operations extended 120 miles into Iraq from Kuwait and terminated at Tallil Air Base.

The 240th accomplished many operational firsts during this deployment to Southwest Asia in 2003. The battalion was most efficient in moving fuel in theater with the IPDS pipeline that was built as far forward as possible. The battalion's accomplishments are a direct result of the hard work and determination of its soldiers. All challenges were met with mission success. Although Quartermasters developed an unofficial motto of *Whatever It Takes*, the soldiers of the command stand tall as the petroleum logisticians in this theater and say *Proud To Serve*!



Without published techniques or procedures, the 240th Quartermaster Battalion set the standard for force protection of pump stations during *Operation Iraqi Freedom* with sufficient stand-offs, triple-strand concertina wire, berms, guard towers and fighting positions.

MSG Gary L. Parsons is currently assigned to the 240th Quartermaster Battalion as the battalion Petroleum Operations Noncommissioned Officer in Charge (POLOPS NCOIC) stationed in Kuwait/Iraq in support of Operation Iraqi Freedom. His previous assignments are POLOPS NCOIC and Platoon Sergeant, 19th Quartermaster Company, Fort Story, Virginia; Logistics NCOIC for Defense Energy Supply Center-Taegu, Korea; Small Group Leader for 77F (Petroleum Supply Specialists) in the Advanced and Basic Noncommissioned Officer Courses, Petroleum and Water Department's Operations NCOIC and Advanced Individual Training (AIT) instructor, US Army Quartermaster Center and School, Fort Lee, Virginia; Platoon Sergeant and Section Sergeant, Company A, 5-159th Aviation in Germany; Assistant Operations NCO, 110th Quartermaster Company (including Operation Desert Shield/Storm), Hunter Army Airfield, Georgia; Squad Leader, Headquarters and Headquarters Troop 1/6 Cavalry, Fort Hood, Texas; Pump Station Operator, 114th Quartermaster Company in Korea; and Petroleum Vehicle Operator, Battery C, 1/68th Air Defense Artillery, Fort Hood.

(Continued from Inside Front Cover)

From the Acting Quartermaster General

FM 4-0 (Combat Service Support) was published on the Reimer Training and Doctrine Digital Library and can be found at http://www.adtdl.army.mil/cgi-bin/atdl.dll/fm/4-0/toc.htm. We anticipate dates for distribution of hard copies in the near future. FM 4-0 provides the authoritative doctrine by which the Army's CSS, as part of the national-theater CSS system, supports full spectrum operations; serves as the Army's keystone CSS doctrine and bridges the gap between Army doctrine and joint and multinational doctrine; and provides the basis for subordinate CSS doctrine, organizations, training, materiel, leadership and education, personnel and facilities (DOTMLPF) development to support Army of Excellence (AOE) forces, transitioning Force XXI organizations, and Army Transformation initiatives for a more agile and responsive force.

Bulk petroleum is still a number one priority in Iraq, and the 240th Quartermaster Battalion (Petroleum Pipeline and Terminal Operating) used innovative solutions to meet unique and often challenging circumstances in providing fuel to our forces. The staging and setting up of the largest tactical petroleum terminal in military history speaks volumes for the professionalism and abilities of the soldiers of the 240th Quartermaster Battalion.

Engineering also played a vital role in the provision of fuel to our forces. There is a little known, highly specialized field in the Engineer Regiment that deals with petroleum operations. These engineers work closely with their Quartermaster counterparts and provide the design and construction expertise required for the Inland Petroleum Distribution System (IPDS). The 416th Engineer Command worked closely with 49th Quartermaster Group to construct the IPDS, emplace pump stations and prepare fuel storage sites. Their success allowed the 49th Quartermaster Group to provide millions of gallons of fuel when needed.

Finally, water production and storage assisted in maintaining combat capability in a hot, harsh environment in Southwest Asia. While soldiers are becoming more reliant on bottled water, there are issues that preclude its use in many circumstances. Packaging, tampering and shipping are all potential problems when dealing with bottled water. Quartermasters with the 77W (Water Treatment Specialist) military occupational specialty need to maintain their proficiency and equipment in order to allow maximum water production when required. New ideas and equipment will enhance water production in the future. There are many lessons learned which will be used to help shape the future force. We must be more agile. Logistics connectivity and status across the theater are critical.

During these busy times, I will do my best to keep you current on what's new in the Quartermaster Corps and how we are approaching the future. My intent is to continue on with the policies and initiatives BG West has implemented until his return. Training will remain the number one priority and we will ensure only the

(Continued on Page 35)

Fueling the Force: Engineering Contributions To a Quartermaster Mission

CPT Dena M. Ridenour

The Corps of Engineers and the Quartermaster Corps work together on the battlefield to establish pipelines to move large quantities of fuel in the theater and corps rear areas. Engineers design and construct the pipeline for the Inland Petroleum Distribution System (IPDS) based on logistical requirements, while Quartermasters establish the tactical petroleum terminals that store and issue the fuel. After Engineers have tested and certified the IPDS, Quartermasters take over operation and control of the pipeline.

*...before the shooting begins. The bravest men can do nothing without guns, the guns nothing without ammunition; and neither guns or ammunition are of much use in mobile warfare unless there are vehicles with sufficient petrol to haul them around....*Field Marshal Erwin Rommel

The ability to accomplish a wide range of engineering missions is the cornerstone of the Engineer Regiment. This diversity manifests itself in current capabilities to include construction, mapping and charting, mechanized and light combat engineering, port operations, and well drilling. These capabilities encompass the broad spectrum of engineering that the Regiment provides. They also facilitate the ability to significantly impact both civil and military operations. During *Operation Iraqi Freedom*, the petroleum engineering capabilities of the Regiment were instrumental in shaping the battlefield and positively impacting the peace and stability of a nation.

A little known, highly specialized field in the Regiment deals with petroleum operations and fueling the force. Working closely with Quartermaster counterparts, Engineers provided the design and construction expertise for the IPDS. The IPDS - advertised as a semi-permanent, general support, bulk fuel storage and pipeline system that can interface with a host nation's fuel source - consists of fuel units, pipeline, and pump stations.

During the ongoing *Operation Iraqi Freedom*, the 416th Engineer Command (ENCOM) worked closely with the 49th Quartermaster Group (Petroleum and Water) to successfully construct the IPDS, emplace pump stations and prepare fuel storage sites. The Engineers' contributions allowed the 49th Quartermaster Group to provide millions of gallons of fuel to the battlefield.

IPDS Design

Because the IPDS mission is multifaceted, it was imperative that the 416th ENCOM and 49th Quartermaster Group establish a strong working relationship in the early stages of the IPDS mission. This began with the initial IPDS design phase where the 49th Quartermaster Group engineer section and the 416th ENCOM G7 shop began their coordination.

By modified table of organization and equipment (MTOE), the 49th contains a Facilities Engineering Branch with an officer in charge (OIC), one noncommissioned officer in charge (NCOIC), a Technical Engineering Specialist, a Plumber/Pipefitter, and an Administrative Specialist. The wartime mission of the 49th Quartermaster Group's Engineering Branch is twofold: (1) assist in the development and preparation plans for the construction of the IPDS in conjunction with the 412th and 416th ENCOMs to support the 49th Quartermaster Group and (2) act as a liaison with the ENCOMs and Engineer pipeline construction companies for the turnover of the IPDS trace.

The 416th ENCOM G7 Technical Services Engineers contained Reserve Component officers well-versed in pipeline operations based on their expertise in the civilian sector. This wealth of technical and practical knowledge influenced the IPDS design by maximizing the system's capabilities.

The IPDS basic design, originally designed by Army developers to employ 90 miles of IPDS with 6 pump stations in any operating theater, does not take elevation, environmental factors such as temperature, or geographic obstacles into account. Hence, the initial stage of the design phase centered on map and ground reconnaissance. Although the Microdem TerraBase Pipeline Automated Petroleum Assistance (PAPA) Program exists to facilitate IPDS design by taking hydraulic performance into account, the PAPA Program was not used for *Operation Iraqi Freedom.* The PAPA Program had limited ability to merge map sheets and data because of the large geographic area the IPDS covered. Once complete, the IPDS design was then forwarded through the 416th ENCOM G3 (Operations) to the combat heavy battalion responsible for the IPDS construction.

Engineers construct the first IPDS pipeline used in war during *Operation Iraqi Freedom.*

IPDS Construction

The soldiers of the 62d Engineer Combat Battalion (Heavy) constructed the first IPDS to be used in war. Although the 62d is extremely accomplished in mainstream horizontal and vertical construction tasks, IPDS construction proved an interesting challenge although a very attainable mission.

To construct the initial lengths of IPDS, the constructing Engineer soldiers - some of whom were under the operational control (OPCON) of the 62d from Company C, 46th Engineer Combat Battalion (Heavy) - worked closely with the 49th Quartermasters to construct the IPDS to standard in roughly three weeks. This included the time for training and staging of equipment. Thus, the average rate of construction for this portion was two miles per day.

As the 62d soldiers continued to arrive in the area of responsibility and completed tasks for RSO&I (reception, staging, onward movement and integration), these Engineers were integrated into the mission and completed the remaining IPDS trace. The 62d also added another company to its team: the 808th Pipeline Engineer Company from Houston, TX. Taking into account all factors, the battalion was able to construct a first and a second IPDS trace averaging just under six miles per day. This was no small feat, given the doctrinal average of construction at no more than 1-1/2 miles of coupled pipeline per day, according to FM 5-482 (Military Petroleum Pipeline Systems).

Additionally, the 62d provided the required horizontal assets to build all necessary berms for fuel lagoons, road networks, and protective berms for the four Tactical Petroleum Terminals (TPTs). These TPTs provided the bulk refueling points for all coalition forces in Kuwait. The Engineers are also responsible for construction of the largest tactical TPT on the Kuwait-Iraq border.

Construction, while a major task for IPDS completion, was only the first step toward mission completion. The second, and final, task before beginning IPDS operations involved the flushing and pressure-testing of the IPDS trace. Doctrinally, there are four fluid options that can be used for the flushing and pressure-testing of the IPDS: potable water, salt water, nonpotable water, and fuel. Fuel was not used because of environmental considerations and because water is not readily available in the Kuwaiti desert. Potable water was delivered via the Tactical Water Distribution System (TWDS), an innovative approach to a difficult situation. A little more than

600,000 gallons of water were delivered to the start of the trace for the flushing and pressure-testing.

The water was used for two separate missions. First, water was used to flush the constructed IPDS trace of sand and debris. Then, the trace was pressure-tested using the remaining water to ensure it could operate at the Maximum Allowable Operating Pressure (MAOP). This translated to saving five trucks with a 5,000-gallon capacity each, or three trucks with a 7,500-gallon capacity each, from having to haul fuel to each separate TPT location each day.

As *Operation Iraqi Freedom* commenced and fuel requirements for V Corps, I Marine Expeditionary Force, and coalition forces increased, so too did the importance of having another IPDS trace. As the theater ground lines of communication (GLOCs) increased, the requirements exceeded the theater's capabilities to push fuel north using truck company assets. Meanwhile, the next length of the IPDS was constructed from the existing IPDS trace at the Kuwait-Iraqi border TPT north into the newly liberated Iraq. This allowed for fuel to be pushed north faster and in greater quantities, thereby shortening the truck turnaround distance and time on the road.

Ensuring Mission Success

Following essentially the similar design steps from the first IPDS trace construction, the 416th ENCOM and 49th Quartermaster Group began the all-too-familiar steps to ensure mission success: designs were created, transportation assets were requested, water sources were identified, and Engineer and Quartermaster soldiers were mobilized to complete an IPDS extension. The Engineer and Quartermaster soldiers, employing strict force protection measures based on current threat, reconnoitered the potential IPDS trace. All details from the reconnaissance were forwarded to each unit's respective higher headquarters. The IPDS extension design was altered to take into account current and future operations.

While the construction of the IPDS achieved historical and operational success never before seen in an armed conflict, the mission was not considered complete until fuel flowed into the TPTs. For this, the Quartermasters operated the IPDS after handover from the Engineers.

The relationship between Engineer and Quartermaster organizations during the initial stages of the IPDS mission is complex. While the Engineers are primarily responsible for the IPDS construction, they also maintain the responsibility for completing the flushing and pressure-testing which some may argue delves into the IPDS operation stage. Once all facets of the Engineer components of the IPDS mission are completed to standard, the IPDS is signed over to the Quartermasters for operation.

A certificate of operability, defined in FM 5-482 (Military Petroleum Pipeline Systems) contains "a statement as to the operability of the line and its acceptance by the operating unit; the section and mileage of the line tested; the standard to which the line was built and tested; the testing pressure; and, the test method and duration of the test." This certificate, under training conditions, is an excellent measure of ensuring that the Quartermaster unit designated to operate the IPDS is aware of the standards of construction for the designated IPDS trace. During war in Iraq, however, this certificate was not signed because of the operational tempo and its impacts on construction tasks.

The Engineer and Quartermaster units did meet and discuss the specifications of construction. This meeting included Quality Assurance and Quality Control checks, MAOP testing, major repair responsibilities, property turnover, and other information involved in the future operations of the particular IPDS.

Once the flushing and pressure-testing were complete for each section of IPDS constructed, the 240th Quartermaster Battalion accepted responsibility for the particular section and petroleum operations began. The 240th then assigned its companies to the various pump stations along the trace to support IPDS operations. As a result of Engineer construction and Quartermaster operation, the IPDS at peak capacity during *Operation Iraqi Freedom* supported the entire theater of operations by moving more than 65 million gallons to fuel the force.

Lessons Learned

A complicated mission executed successfully accurately describes the IPDS mission during *Operation Iraqi Freedom*. Success did not, however, come without learning important lessons and experimenting with different methods along the way. The following areas highlight major lessons learned through Engineers and Quartermasters working together on the IPDS pipeline.

Relationship Critical

The relationship between the Engineers and Quartermaster organizations was critical in establishing the success of the IPDS mission. Doctrine specified the general nature of the relationship. However, doctrine did not account for the various, specific decisions made throughout the execution phase that impacted that relationship. For instance, property issues, decisions during the construction phase that impacted operations, and general liaison concerns were a few of the areas that require further exploration. These need to be specifically addressed in doctrine to account for any problems that may be encountered in future operations.

Two major areas directly affected by the relationship dealt with the transportation of 1,400 IPDS containers, all standard 20-foot International Standards Organization (ISO) containers, as well as water requirements for the flushing and pressure-testing. While the Engineers are responsible for IPDS construction, the Quartermasters own the IPDS and all its associated containers. Movement of these containers requires extensive transportation assets that neither the Engineer units nor the Quartermaster units possess. Because the Quartermaster operating unit owns the property, all transportation requests must go through the 49th Quartermaster Group. This requires extensive coordination for the realization of the staging plan. Furthermore, the 49th Quartermaster Group also coordinated for the water needed to complete the flush and pressure tests. While water impacts IPDS construction, the constructing Engineer unit should coordinate directly for the water. The only decision for the operating Quartermaster unit is what type of water (nonpotable or potable) will be used.

Force flow of Engineer units critical to IPDS mission completion factored into minor, early execution problems. Had the 808th Pipeline Engineer Company arrived earlier, this unit would have positively impacted construction efforts by providing technical expertise and practical experience to those Engineer soldiers who had never seen or dealt previously with the IPDS. Although the 62d performed superbly, their Engineers' learning curve in the beginning would have been drastically reduced.

Important to every construction mission is its associated Quality Assurance and Quality Control programs. For the IPDS mission, it is critical that the ENCOM G7 and the 49th Quartermaster Group Engineer shops develop a cohesive, coordinated program to influence quality IPDS construction. Due to the haste of impending war, this Quality Assurance and Quality Control program was not fully developed and resulted in a small number of IPDS sections with burst pipe or leaking couplings that needed replacement. The implementation of such a critical program would help to prevent such faults and influence further cooperation between both organizations.

Operation Iraqi Freedom is an IPDS success story. It was the first time the IPDS was successfully constructed and operated during wartime. It was also the first time the IPDS played an integral role in theater fuel distribution plans. By recognizing the potential to rapidly support advancing forces, the IPDS was instrumental in fueling the force. A tribute to the Engineer Regiment and the Quartermaster Corps, the IPDS highlights the continued contributions the Engineer Regiment provides in its many diverse roles.

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Quartermaster Commentary – Water Supply in Iraq and Kuwait

MAJ Timothy A. McKernan

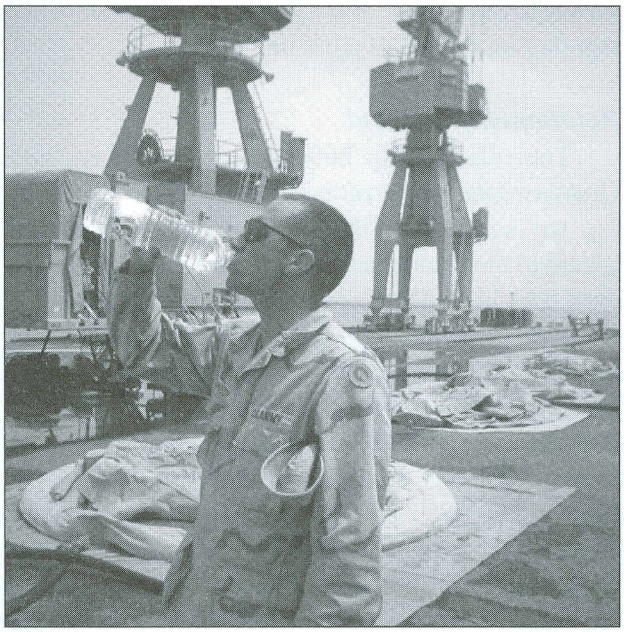
The US Army Quartermaster Center and School's Petroleum and Water Department has a saying: *The ultimate weapon runs on water*. Indeed, a soldier cannot fight and survive on today's battlefield without adequate water. In Kuwait and Iraq, with the relentless heat, water indeed became the one element that has maintained combat capability during the war on terrorism in Southwest Asia.

In the first six months of 2003, as the United States and its coalition partners first built up forces in Kuwait and then transitioned into *Operation Iraqi Freedom*, liquid logistics – bulk fuel and water – have been true success stories for the Quartermaster Corps. Soldiers have always had enough water to drink, and operations never slowed because of a lack of fuel. These successes rest mainly on the backs of the hard-working fuel and water specialists, as well as the truck drivers who delivered millions of gallons of fuel and water throughout Kuwait and Iraq.

Focusing on supplying water, this article will discuss some initiatives that went well and should therefore be continued. However, just as importantly, I'll discuss what went wrong and what we need to learn to prevent recurrence of errors. The main topics will be bottled water, water production and storage, and water distribution.

Bottled Water

Soldiers love it. Logisticians hate it. Bottled water, and its widespread use, caused significant problems beginning with the buildup of forces. Early in the operations, units were concentrated in Northern Kuwait, where it was relatively easy to deliver large quantities of bottled water using a combination of military and host nation transportation assets. However, just before crossing into Iraq, logisticians began to feel the second- and third-order effects of the decision to rely so heavily on bottled water.



Bottled Water

Soldiers love it. Logisticians hate it.

Before beginning combat operations, very few combat service support (CSS) units and their equipment were brought into Kuwait, causing an immediate shortfall of transportation assets. Even contracted and host nation trucks were not enough to deliver the huge quantities of supplies forward as units built combat power and prepared for attack. The rapid buildup associated with the arrival of the 101st Infantry Division, followed quickly by the 4th Infantry Division and 3d Armored Cavalry Division, further strained available CSS assets. Adequate transportation was simply not available to bring sufficient quantities of rations, bottled water, repair parts and other supplies to units in Kuwait and then far into Iraq as *Operation Iraqi Freedom* moved rapidly to the north toward Baghdad.

Not only did bottled water consume far too much transportation, it also required special handling. Most bottled water was palletized and had only one or two

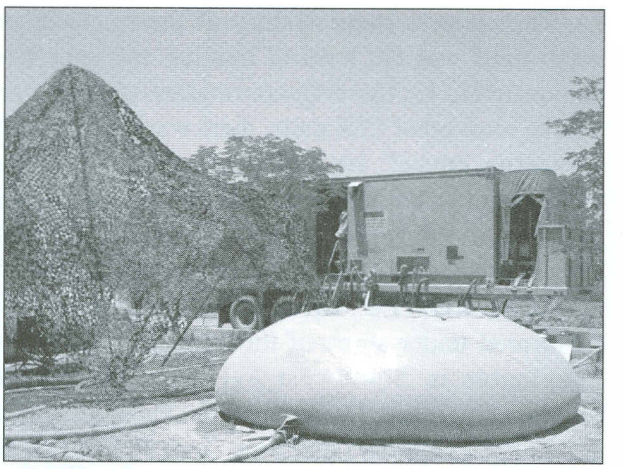
layers of plastic shrink wrap. With this packaging, cases of water were soon strewn all over the roads of Northern Kuwait and Iraq. Subsequently, all water had to be placed in containers, which both increased load time as well as the need for container handling equipment forward on the battlefield. Also, on more than one occasion, planners had to decide between either sending food or sending water because of a lack of transportation assets.

The final problem with bottled water was suspicion about its quality. On many occasions, tests of bottled water showed contaminants that required removal and destruction of entire production runs. This not only created further shortfalls of water for the troops, but also caused some soldiers and leaders to question the quality of all the pallets of bottled water. Also, introduction of commercially produced water to the battlefield brought into play the possibility of water being poisoned by terrorists or the enemy. Although this scenario did not play out, poisoned water remains a concern today.

Lessons Learned About Bottled Water

Currently, Army policy states bottled water will be used only when bulk water sources are not available. However, the reality is that soldiers now expect bottled water, despite the availability of water purified by Army water units. Senior leaders must either enforce the policy of using water from the Army's Reverse Osmosis Water Purification Units (ROWPUs) equipment or increase the amount of transportation and materials handling assets necessary to move huge amounts of bottled water forward on the battlefield.

Also, any contracts for bottled water must be written to ensure adequate packaging. Pallets of water must first be banded and then adequately wrapped in plastic to ensure the pallets can handle the rough roads inherent to combat operations. Additional materials handling equipment must be allocated, and moved forward, so that bottled water can be properly taken off trucks. If containers are used to transport bottled water, the Army must procure additional container handlers. Although maintenance is currently a problem, I recommend procuring additional Kalmar Rough Terrain Container Handlers (RTCHs) because of their versatility in being able to move multiple containers. The newly fielded Kalmar RTCH can handle containers of assorted sizes and also has variable reach capability, whereas the Army's other RTCHs proved inadequate in both operational readiness and in their ability to position containers properly.



This 3,000-gallon fabric tank stores ROWPU-purified water drawn from a moat surrounding one of Saddam Hussein's former palaces.

Water Production and Storage

Although water units have produced and continue to produce and store water throughout Iraq, I will concentrate on water operations in and around Baghdad, where I spent the better part of two months. In Baghdad, water is currently produced and stored by 1st Armor Division as well as two theater units, the 1555th Quartermaster Detachment (Water Purification) and the 79th Quartermaster Company (Water Supply).

Within days of the end of major combat operations, water production and storage sites were established throughout Baghdad. Initially, water production began at sites along the Tigris River in downtown Baghdad. Subsequently, water production began at additional sites, mainly around Baghdad International Airport. In late March 2003, as part of the theater's expansion of CSS capabilities, the 1555th and 79th began water production and storage operations on the grounds of one of Saddam Hussein's former palaces. Since that time, the 1555th and 79th have produced, stored, and issued more than 10 million gallons of water in support of coalition forces and the civilian communities near Baghdad.

The clearest success story of these and other water units was the level of training and expertise demonstrated by these Quartermasters during war. Unlike most other CSS units, there was a very slight "learning curve" among water units. Reserve Component water units performed at the same level as their active duty counterparts. Quartermasters not only understood how to operate and maintain complex ROWPU equipment, but they also performed under some of the harshest conditions imaginable in Southwest Asia. The difference between *Operation Desert Storm* in the early 1990s and today's ongoing *Operation Iraqi Freedom* was clear. Units were not operating newly fielded equipment. Soldiers had received excellent training at the US Army Quartermaster Center and School, Fort Lee, VA. Units also had completed realistic training during predeployment operations and during their reception, staging, onward movement and integration (RSO&I) operations in theater.

The key to success for continued operations, however, was the use and availability of ROWPU replenishment kits. With a 30-day supply of all consumable items (except filter elements, multimedia and calcium hypochlorite), the kits provided water units everything necessary to operate. The ROWPU kits also prevented units from having to order dozens of separate items through an already-strained supply system. The only issue with replenishment kits was that most units were deployed forward with a single kit per ROWPU. Problems with continued supply often led to units contacting sister units to borrow critically short supplies until the supply system could deliver additional kits.

Trucking Bottled Water and Food

Hauling With 'Water Buffalos'

With the relentless heat in Iraq, water units in Baghdad had difficulty keeping the chlorine content of purified water at required levels. Heavy use of chlorine tablets and calcium hypochlorite quickly dwindled the theater's stocks. Fortunately, through close coordination between water units, the 49th Quartermaster Group (Petroleum and Water) and the 321st Theater Materiel Management Center (TMMC), additional chlorine supplies were located in Kuwait.

Another problem with water production and storage came not from the equipment or soldiers, but from the actual location of the ROWPUs and water storage sites. Divisional units, along with their smaller 600-gallons per hour (GPH) ROWPUs, were set up and operated mainly along the Tigris River. At the Tigris River were an endless supply of water, a large concentration of troops and multitudes of thirsty Iraqis. The larger 3,000-GPH ROWPUs and the large 50,000-gallon collapsible fabric tanks for water storage were established on and around Baghdad International Airport, which was a less densely populated area.

The solution seemed quite simple. Switch the locations of the ROWPUs so that the larger systems could use the Tigris River and thus provide more than enough water for both military personnel and the local population. However, despite the best efforts of several separate staffs, this has not occurred as of

the writing of this article in Summer 2003. Units, long protective of "their" organic units, seem unwilling to move their equipment and soldiers in return for better-suited equipment and the same level of professional soldiers.

Two of the usual reasons given for soldier preference of bottled water were that it "doesn't taste like chlorine" and that bottled water can be kept cool easier. While soldiers add chlorine to ROWPU-purified water to ensure safety for drinking, this same water is quite agreeable if chilled. However, even to this day, many units in Iraq and Kuwait do not have water chillers installed on their small water tankers or "water buffalos." As more chillers arrive daily, this problem will eventually solve itself.

Lessons Learned: Water Production and Storage

First and foremost, the instruction given to the Army's soldiers with the 77W (Water Treatment Specialist) military occupational specialty (MOS) is working. The Quartermaster community should fight any further cuts in instruction time as were seen during the mid-1990s. Quartermasters with the 77W MOS should continue to train on all types of water production and storage equipment because they often find themselves called upon to operate equipment other than what they had trained on in their units.

The idea of the replenishment kits should be expanded. Specifically, the Defense Logistics Agency (DLA) should develop a national stock number (NSN) that allows a unit to order a "basic load" of ROWPU filters for the type of system its soldiers operate. As it is easier to use a single NSN to order a month's worth of consumables, so would it be easier to order an entire change of filters for a ROWPU.

Water chillers have been staged and kept as war reserves at depots throughout the world. However, chillers were late in being released - despite *Operation Iraqi Freedom* being fought in a desert environment. In the future, the Army should ensure release of these stocks early enough so that units have water chillers already installed on "water buffalos" before combat operations.

Finally, the Army should move all ROWPUs out of the divisional force structure and move them into water purification detachments. Additionally, these detachments should be fielded with a composite mix of ROWPUs. By having both 600-GPH and 3,000-GPH (and soon the 1,500-GPH) ROWPUs, water detachments could readily put systems where placement makes the most sense based upon available water sources, supported populations, and the ability to store and distribute water.

The 1555th Quartermaster Detachment (Water Purification) - Iowa National Guard soldiers from Dubuque - stores water purification supplies (left) and produces drinking water in 3,000-gallon per hour ROWPUs (right) for the many soldiers and Marines, as well as the local population, around Baghdad during *Operation Iraqi Freedom.*

Greatest Challenge

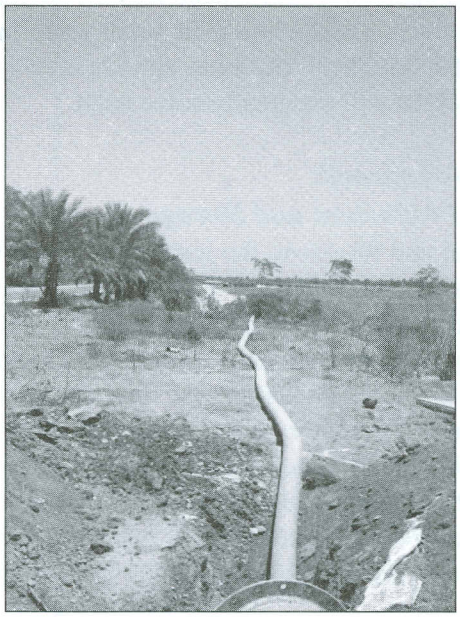
By far, the greatest challenge in the water arena is the distribution of water. The problems associated with distributing bottled water were already discussed. The distribution of bulk, ROWPU-produced water is as great a challenge.

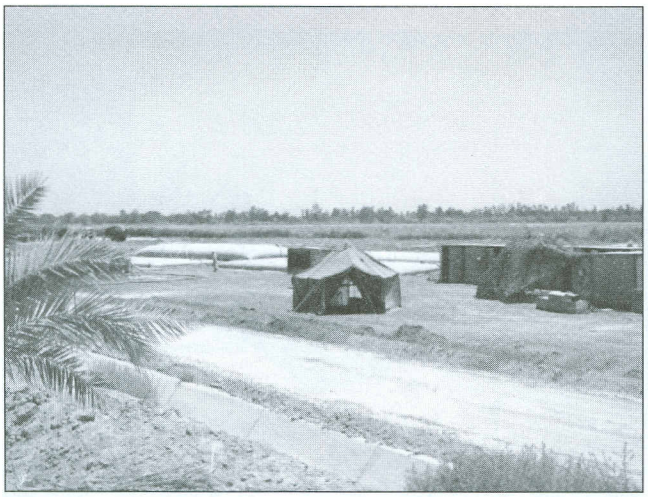
Because ROWPUs must be set up near water sources, they often are not placed in the center of large populations. Therefore, although water was readily available in Iraq, drinkable water had to be hauled to where it could be consumed. Clearly, the current equipment available to the Army for water distribution is not sufficient to handle the task.

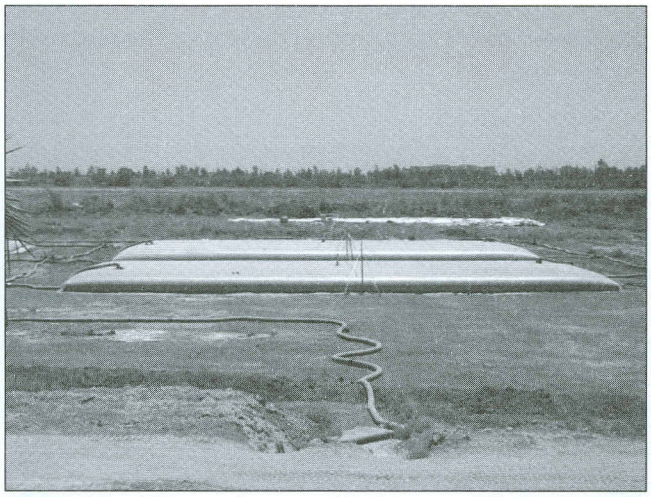
The semi-trailer mounted fabric tanks (SMFTs), while inexpensive and easy to use, are by no means ideal for the distribution of water except to customers with large storage capabilities. Because SMFTs cannot be moved unless completely filled, Army water units often dumped as much as two-thirds of a load after making a water delivery. Since most units have only one or two 400-gallon "water buffalos," units were forced to make multiple trips to water supply points to get water for their soldiers.

A good news story on ensuring water was not wasted comes from the villages surrounding Baghdad International Airport. Here, with the help of Civil Affairs teams, units such as 43d Area Support Group were able to buy commercial tanks from the local economy and donate them to villages without a safe or adequate source of water. Then, after water deliveries were made to Army units near these tanks, the rest of the water was given to Iraqi villagers. At essentially no cost, great strides were made toward

Photographs of the 1555th Quartermaster Detachment (Water Purification) and the 79th Quartermaster Company (Supply) by MAJ Timothy A. McKernan







The 79th Quartermaster Company (Water Supply) - US Army Reserve soldiers from Marion, Tiffon and Akron, Ohio - stores purified water in several 50,000-gallon collapsible fabric tanks on the grounds of one of Saddam Hussein's former palaces near Baghdad (left and right) for issue to customers. Via a Tactical Water Distribution System (top), Quartermasters transfer water from the 3,000-gallon fabric tanks located with the ROWPUs to the 50,000-gallon storage tanks.

improving relationships between the Iraqi people and the US Army. Not only did violence and looting decrease in these villages, but the people also were soon providing invaluable information on locations of enemy weapons caches and terrorist plans.

Water to Local Population

With the large concentration of civilians in Baghdad coupled with the Army's capability to produce an excess of ROWPU-purified water, Army leaders have continued to attempt to provide water to the local population. There is concern about the security of having local Iraqis at water distribution points. While a valid concern after attacks on US and coalition forces in Baghdad, Army leaders should consider using the Tactical Water Distribution System (TWDS) to pipe excess ROWPU-purified water to storage sites outside Army compounds. Local authorities could be allowed to hire Iraqis to operate the water-dispensing sites. This would not only virtually eliminate the threat to military forces, but also would spread countless goodwill by providing jobs to people who desperately want to work and providing clean safe water to civilians suffering from the effects of the war.

The easiest solution to an excess of water production but a shortfall in successful water distribution: procure distribution assets and keep them in Quartermaster inventory. Hard-walled tankers, while more expensive than SMFTs, are much better suited to the current, mostly static operations in Iraq. While some water tankers have arrived in theater, their numbers are not nearly enough to support requirements.

Another option that has not been used to any great extent is contracting with local merchants to provide water trucks to deliver water to both military forces and civilians. Although some Iraqis have resumed normal business operations, much of the country's assets such as tankers sit idle. By hiring the Iraqis to deliver excess water to their own people, warfighters will progress toward bringing peace to Iraq.

Water operations in Iraq continue to mature and get better every day. Already, water operations in Iraq are a great success. However, there remains room for improvement by fixing the breaks in the system. A great strength of the US military is taking the time to study operations. Soldiers improve on what is right, and scrap what is wrong. Across the entire spectrum of logistics, all leaders must do their part to ensure victory in the continuing war on terrorism and any future wars.

During Operation Enduring Freedom in Kuwait and Operation Iraqi Freedom in Iraq, MAJ Timothy A. McKernan was the S3 (Security, Plans and Operations), 43d Area Support Group, Fort Carson, Colorado. He has a bachelor of science degree in petroleum engineering from the Montana College of Mineral Science and Technology in Butte and a master of science degree in logistics management from Florida Institute of Technology. He is a graduate of the Quartermaster Officer Basic and Advanced Courses, Army Logistics Executive Course, and the Command and General Staff Officer Course. MAJ McKernan has served in a variety of water and petroleum positions. He served as Executive Officer, 114th Quartermaster Company (Petroleum Pipeline) in Korea; Liquid Logistics Officer (Fuel and Water), 4th Infantry Division, Fort Carson; Theater Fuel Manager for the United Nations Operations in Somalia; Commander, Company A (Supply and Services), 704th Main Support Battalion, Fort Carson; and Instructor/Writer, Division Chief and Deputy Director, Petroleum and Water Department, US Army Quartermaster Center and School, Fort Lee, Virginia.

Operation Iraqi Freedom and the Quartermaster Home Page

A link on the Quartermaster Home Page at **www.quartermaster.army.mil** now directly accesses the US Army's website for *Operation Iraqi Freedom*. Continuously updated, the site includes press releases and color photographs of continuing operations in Southwest Asia and a "Defend America" link that has news about the ongoing war against terrorism. New to the Quartermaster Home Page itself is a link titled "New! Articles From the Field" by deployed Quartermaster soldiers who discuss their units' actions.

The 593d Corps Support Group at Fort Lewis - Supporting A Spectrum of Military Interests

CPT Mark A. Spear

Sitting on the shores of the Puget Sound - where Army Explorers Meriweather Lewis and William Clark once traveled more than 200 years ago - is Fort Lewis, WA, home of America's Corps and the two newest Stryker Brigades.

Protected by Mount Rainer, Fort Lewis was first constructed as Camp Lewis under the watchful eye of young Quartermaster CPT David L. Stone on May 26, 1917. In three months, some 10,000 men built 1,757 buildings and 422 other structures for the first occupation by 50,000 men.

On July 18, 1917, the National Army Camp at American Lake, WA, was named in honor of CPT Meriwether Lewis, Commander of the Lewis and Clark Expedition. Camp Lewis was opened as the first National Army cantonment for draftee training with its first recruits arriving on September 5, 1917. By December 31, Camp Lewis was recognized as the largest military post in the United States after the arrival of 37,000 officers, cadre, garrison personnel and trainees in 1917. Fort Lewis has trained and deployed hundreds of thousands of soldiers and leaders throughout its history. Today, Fort Lewis remains the training, mobilization and deployment station for hundreds of Reserve Component units scattered throughout the Pacific Northwest.

No longer the home of one of the big divisions, Fort Lewis units contribute many units in a supporting role. From the start of Army Transformation in 2000 with the Interim Brigade Combat Team to the activation of the Army's youngest cargo transfer company in 2001, Fort Lewis remains engaged in the past, present and future of military service. The 593d Corps Support Group (CSG) at Fort Lewis solidified its reputation as the I Corps backbone by continuing to support a spectrum of installation, Army and national interests.

Soldiers from the 593d Corps Support Group guard a convoy stopped during *Operation Iraqi Freedom.*

For almost two years, units in I Corps deployed monthly to *Operation Noble Eagle, Operation Enduring Freedom* and *Operation Iraqi Freedom* to support the global war on terrorism. Yet, I Corps units remained intently focused on the Army Transformation process that culminated in the widely followed Certification Exercise conducted at the National Training Center and the Joint Readiness Training Center. The 593d CSG developed a company-sized logistical task force (LTF) consisting of a cargo transfer platoon, supply platoon, truck platoon, and a maintenance support team. This LTF provided seamless and instant logistical support to the brigade support battalion (BSB) that provided direct support to the new Stryker Brigade.

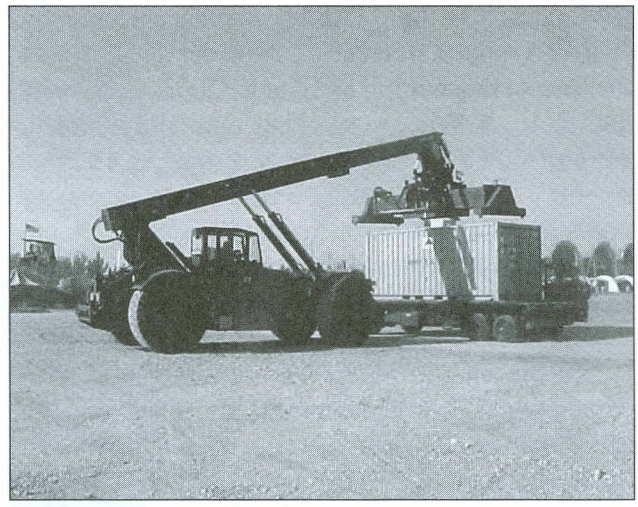
The 593d CSG was originally the 1350th Engineer Base Depot Group, activated August 1, 1944, for service in World War II and constituted August 7, 1944. Following a series of reactivations

and redesignations from 1946 through the late 1960s, the Headquarters and Headquarters Company (HHC) deployed to Vietnam. The HHC participated in 14 campaigns from 1966 to 1972 as HHC, 593d General Supply Group. Inactivated in April 1972 and finally reactivated March 21, 1973, as the 593d Area Support Group at Fort Lewis, the group immediately took over many post support missions critical to the day-to-day operations of Fort Lewis while simultaneously deploying units worldwide in support of European and Korean contingency operations.

Today, very little has changed as the three combat service support (CSS) battalions that constitute the 593d CSG continue to support and deploy. The 44th Corps Support Battalion, the 57th Transportation Battalion and the 80th Ordnance Battalion work together to provide customer support to three very important entities: the US Army, I Corps and Fort Lewis, and the Pacific Northwest community. This mission is a challenge for any brigade-sized element.

During the past 1-1/2 years, the 593d CSG units have assisted more than 50 Active and Reserve Component units in the deployment process by operating ranges, evaluating training and providing CSS in the form of transportation, maintenance and supply. In the months preceding the war in Iraq in 2003, several 593d logistical units deployed to support *Operation Enduring Freedom* in Afghanistan.

The 40th Truck Company (POL) participates in an annual fuel distribution exercise.



Kalmar Rough Terrain Container Handler (RTCH) unloads a truck at Bagram Air Base in Iraq.

Two ammunition distribution companies - the 351st Ordnance Company, a US Army Reserve (USAR) unit from Romney, WV, and the 63d Ordnance Company from Fort Lewis - deployed to several locations to support Central Command (CENTCOM) with ammunition logistics. The 21st Cargo Transfer Company (CTC) was directed to support multiple logistics support areas (LSAs) in Afghanistan with their module cargo transfer platoons and the new Kalmar Rough Terrain Container Handler (RTCH).

Meanwhile, the remaining units of the 593d assisted other Fort Lewis units with their deployments. The 24th Quartermaster and 542d Maintenance companies operated the two supply support activity warehouses. The 21st CTC operated a container yard and the Joint Transportation Directorate's Technical Inspection and Scale (TIP/Scale). The 513th Transportation Company continued installing a "hub and spoke" supply route to and from the Yakima Training Center in Washington, while preparing its heavy equipment transporter (HET) platoon for a pending deployment. The 265th Movement Control Team performed back-to-back missions for both *Operation Enduring Freedom* in Afghanistan and *Operation Iraqi Freedom* in Kuwait.

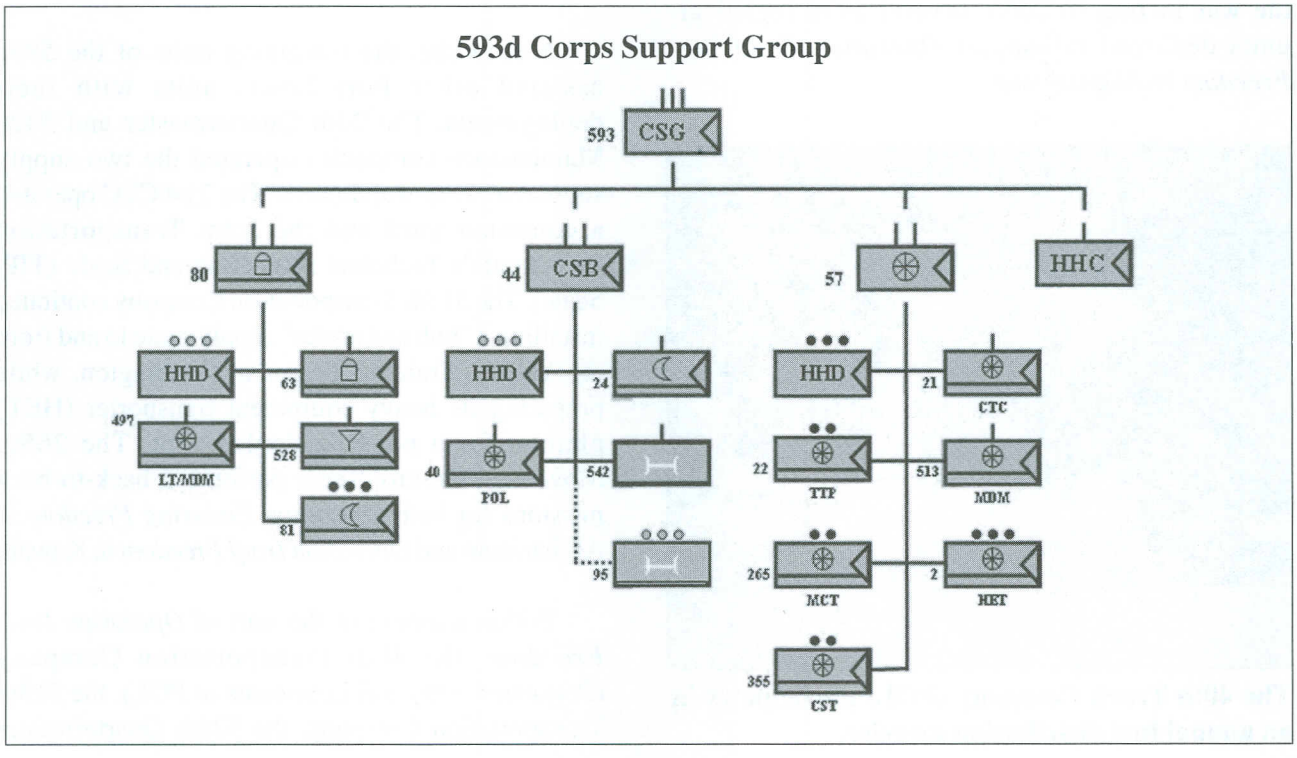
Within a month of the start of *Operation Iraqi Freedom,* the 40th Transportation Company (Petroleum, Oils and Lubricants or POL), the 513th Transportation Company, the 528th Quartermaster

Company, and the 542d Maintenance Company (Direct Support) all received the order to deploy. At the time of this writing in Summer 2003, those units and their soldiers are working extremely hard in support of CENTCOM and V Corps' operations ongoing in Iraq and the surrounding areas of operation in Asia. Currently, the 593d CSG has more than eight units deployed to Afghanistan, Uzbekistan, Iraq, Qatar and Kuwait.

In the past 1-1/2 years, the 593d CSG has witnessed a shift in deployment methodology because of a shift to nonstandard missions: the 593d deployed the separate, numbered companies and detachments to work under another, familiar headquarters. The companies and detachments were separated into tailored packages. In contrast to previous deployments, the companies and detachments did not deploy as whole units or sections to answer a specific logistical requirement.

The newest cargo transfer company in the Army, the 21st CTC that has the newly fielded Kalmar RTCH, was directed to provide three RTCH teams to various points in the CENTCOM area of responsibility (AOR). Each RTCH team consisted of a noncommissioned officer (NCO) and three operators who were deployed for more than six months. The mission of these RTCH teams normally would require, at the least, a cargo section that is a much larger contingent than what was sourced. Logistics commanders and planners in the 593d started to notice a shift from normal operations to one of stopgap measures. Regardless, the 593d prepared its units to deploy in all echelons of command by planning additional training of the sections and squads.

The 528th Quartermaster Company begins preparing a fuel system supply point (FSSP) for bulk fuel operations needed to sustain combat forces deep in Iraq.



Training in the 593d is a process of developing opportunities based on current, real-world support missions. Commanders at all levels are able to incorporate training opportunities with all units and branches of the Armed Services by adding training scenarios and combining resources, training areas, ammunition and support personnel to maximize available time and enhance the learning objectives.

Adapting to the heightened operating tempo (OPTEMPO), all three battalions conducted either an external evaluation (EXEVAL) or a battalion field training exercise (FTX). In one case, a battalion not only provided knowledgeable logisticians as evaluators, but also aggressive and eager Transportation soldiers to function as the opposing force (OPFOR). The evaluated battalion not only trained itself amidst an evaluation, but also provided real-life support to the 81st Separate Armor Brigade of the Washington Army National Guard. Later that autumn, logisticians throughout the group participated in the I Corps Warfighter Exercise of 2002. With the 80th Ordnance Battalion supporting *Operation Enduring Freedom* and the 57th Transportation Battalion on high alert for possible "Wild Land Fire Fighting" duty, the 44th CSB was tasked to provide life support to more than 3,000 Active and Reserve Component soldiers and also civilian contractors for more than four weeks.

Even in the face of a pending deployment for the headquarters company in support of V Corps and the 1st Cavalry Division, the 593d and subordinate units never withdrew from any of the daily tasks and activities required to sustain Fort Lewis and all of I Corps. The 593d took on more security missions: established five permanent RTCH teams for container handling support to deploying units, provided continual line-haul support, and continued to support the local community through the I Corps Community Connector Program.

Part of developing soldiers and engaging the local community as a "good neighbor" is the 593d CSB's investment in the Community Connector Program. The 593d CSG works closely with Washington's capital city of Olympia, while other major subordinate commands on Fort Lewis align with other cities in the area. The 593d soldiers have participated in the Annual Downtown Cleanup, spent their personal time with students at a middle school, donated hundreds of gifts to the Santa's Castle of Fort Lewis during the Christmas holidays, and provided the CSG's logistical talents for transporting and raising the gigantic Olympia Christmas Tree. This last year, the 593d CSG soldiers learned some truly rewarding lessons while providing critical host support to the Washington Special Olympics. Soldiers of all ranks volunteer one weekend a year to make these annual summer games a success.

Since September 11, 2001, the 593d CSG has carefully stretched itself and earned a reputation as an organization capable of meeting multiple requirements over disparate locations and completing those duties expertly. The 593d strives daily to be able to support any mission, at any level - whether logistical, operational or community-related.

CPT Mark A. Spear is currently assigned to the 7th Corps Support Group (CSG) as a Transportation Planner for Joint Task Force Liberia in Vicenza, Italy. He was the S3 (Operations Officer) for the 593d CSG, Fort Lewis, Washington, when he wrote this article. Previously, he was the 593d CSG Deputy Support Officer and then Commander of Headquarters and Headquarters Detachment, 57th Transportation Battalion as well as Commander of the 21st Cargo Transportation Company at Fort Lewis. Other assignments include Battalion Rear Detachment Commander, Battalion Support Platoon Leader and Tank Platoon Leader, Company C, 1st Battalion, 12th Cavalry Regiment, 1st Cavalry Division at Fort Hood, Texas. He is a Distinguished Military Graduate of the University of Idaho with a bachelor of science degree in communications. He was commissioned through the Reserve Officers' Training Corps program as an Armor officer in 1995. Military education includes the Combined Logistics Captains Career Course at Fort Lee, Virginia, and the Combined Arms and Services Staff School at Fort Leavenworth, Kansas.

The 16th Corps Support Group's 'Best of Breed' Program Improves Business Practices, Overall Readiness

MAJ Timothy D. Brown

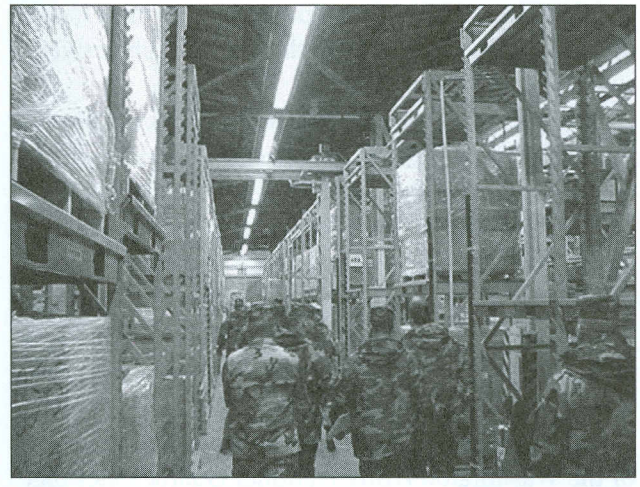
As part of a continuing effort to improve the overall readiness of the supported units, the 16th Corps Support Group (CSG) developed and incorporated a program it called "Best of Breed." The 16th CSG is one of two organic, active duty CSGs of the 3d Corps Support Command. Headquartered in Hanau, Germany, the 16th CSG provides combat service support to V Corps forces.

The 16th CSG began the "Best of Breed" program after several key CSG leaders identified correlations with the lessons of Jack Welch's "Best of Business Practices" designed in the early 1990s. Jack Welch, a former chief executive officer for General Electric Company, attempted to capture the best initiatives of industry's top performers. He then incorporated their practices into his own organization, one of the most successful corporations in United States history.

To establish a baseline for the 16th CSG, group leadership invited the Velocity Management Team from the US Army Quartermaster Center and School, Fort Lee, VA, to assess current practices. The team conducted a three-day inspection of the 16th CSG's four geographically dispersed supply support activities (SSAs) and three direct support unit (DSU) maintenance activities.

As a result of the Velocity Management Team's findings, the 16th CSG commander directed the support operations staff to use the inspection as a baseline for a "Best of Breed" program. The program's goals were to share and then incorporate the successes in each of the unit's SSAs and DSUs.

The support operations section quickly developed the "Best of Breed" program with three phases. In Phase I, the SSAs and DSUs in the 16th CSG received the Velocity Management Team's findings and recommendations. In Phase II, the 16th CSG scheduled several professional development sessions for supply and maintenance leaders. In Phase III, supported units were invited to provide feedback on unit performance.



The 16th Corps Support Group leaders share ideas on supply excellence practices during the 'Best of Breed' Days.

Phase I: Internal Assessment

The Velocity Management Team's inspection revealed several strengths. The SSAs and DSUs performed well in customer service, daily support operations and incentive programs. However, the team noted that every unit did not use these successful practices uniformly. The team recommended cross-training between units to share ideas and encourage creative competition. As a result, units began cross-leveling ideas highlighted during the team's inspection. Whenever applicable, the SSAs and DSUs began adopting each other's successful business practices. While all of the activities fared well, several were highlighted during the inspection out-brief. Two noteworthy initiatives included an incentive awards system and a customer assistance program.

The 77th Maintenance Company, in Babenhausen, Germany, uses an incentive rewards system to encourage greater efficiency by sections within the maintenance shop. The shop foreman has a daily worksheet of all the job requirements and

performance standards that are compared to the actual job results in a numerical score. The foreman tallies each section's "scores" at the end of each month: the higher the score, the better the performance. The soldiers of the winning section are awarded a day off the following month. The section that scores the least is presented the "Bent Wrench" award, a gag award that must be displayed to inspire greater efforts from the section the following month.

The 26th Quartermaster Supply Company, based in Hanau, Germany, uses a customer assistance program. This initiative facilitates customer participation in the SSA's operations. The company maintains a customer assistance and reference center designed to assist the supported unit. The SSA provides books and catalogs for customers to research parts and also computer terminals with desktop instructions to help customers order supplies.

Phase II: 'Best of Breed' Days

After units learned about each other's successful business practices, the 16th CSG launched into Phase II: "Best of Breed" Days. The 16th CSG held a two-day event designed to showcase and share ideas. The itinerary was designed to include each 16th CSG SSA and DSU emphasizing "Best of Breed" practices. This event proved invaluable, based on feedback from more than 75 personnel who attended the conference. Not only did the "supporting units" gain a better understanding of how to improve efficiency and performance, but also participants exchanged ideas about how to keep up with the requirements of today's high operating tempo.

Phase III: Customer Assistance Conference

Shortly after the completion of Phase II, the final phase of the "Best of Breed" program began to unfold. The intent for Phase III was to use the first two phases as springboards to focus extensively on improving assistance to the supported unit. To learn more about the supported units, the 16th CSG held a one-day Customer Assistance Conference. Representatives from V Corps' separate brigades and battalions received guidance on how best to access services provided by the 16th CSG. Key to the conference's success was the feedback on customer satisfaction and suggested possibilities for further improving service.

Customer units attend a conference to improve procedural knowledge and provide feedback on combat service support.

Supply Excellence

Not only did the "Best of Breed" program improve the supported units' readiness, but it also raised the performance standards among all the 16th CSG's SSAs and DSUs. The hard work paid off with announcement of three Chief of Staff, Army, Supply Excellence Awards for 2003. The recognition by the evaluators for the Supply Excellence Awards - as well as the preliminary nominations for the competition by V Corps and US Army Europe - are very good indicators that "Best of Breed" practices work. More important is the improved unit readiness posture of the customers. Recognition, however, has not instilled complacency.

Road Ahead

Part of the campaign plan for the 16th CSG is to maintain perpetual momentum - trying to improve in each area of support. The 16th CSG's campaign plan is a systemic and long-term effort. This unit is always searching for new ideas. Bottom Line: All of these initiatives, all of these efforts focus on one thing and one thing only - supporting the warfighters of V Corps with the "Best of Breed" logistics.

MAJ Timothy D. Brown currently is the Lieutenant Colonel Assignments Officer, US Army Total Personnel Command, Alexandria, Virginia. He previously was Support Operations Officer, 16th Corps Support Group, Hanau, Germany, from 29 April 2002 through 10 June 2003.

Intermediate Staging Base Success At the Joint Readiness Training Center

CPT Derren Siglock

The success of a brigade combat team (BCT) rotation through the Joint Readiness Training Center (JRTC) at Fort Polk, LA, begins at the intermediate staging base (ISB) in Alexandria, LA. The BCTs deploying into the JRTC maneuver box at Fort Polk must conduct reception, staging, onward movement and integration (RSO&I) into the area of operations (AO) as the initial phase of tactical training. The ISB facilitates this process.

During a traditional Army National Guard (ARNG) rotation, an area support group (ASG) provides logistical command and control (C2) over the entire logistical operation at both the ISB and the logistics support area (LSA). Corps support battalions (CSBs) provide the best task organization (T/O) to execute the logistical missions in the ISB and LSA because of the support operations staff structure. This structure coordinates logistics actions and missions in the ISB and LSA by tasking combat support (CS) and combat service support (CSS) units for a combined or "nested" effort to accomplish the BCT commander's logistical intent. Before entering the combat maneuver area or at a tactical assembly area (TAA), the BCT goes through an RSO&I process at the ISB coordinated by a CSB.

The BCT's combat power is focused through the four primary CSS functions in the combat zone: supply, transportation, maintenance and combat health support. Then the BCT is organized for entry into the combat maneuver area by building rear and forward logistics support to allow the BCT to gain entry by air, land or a combination of both. Follow-on logistics elements (LSA CSB) establish maneuver area support and logistics sustainment for the BCT to maintain the fighting forces' battle rhythm by tasking and focusing logistics resupply and rearmament seamlessly during the fight.

This article details the success of the 45th BCT, an enhanced separate brigade (eSB) of the Oklahoma ARNG, at JRTC rotation 02-07 from the perspective of the 232d CSB in the ISB. The 232d CSB and the 33d ASG of the Illinois ARNG worked closely to provide the seamless logistical support required for combat success. Specific areas of importance were the intense "hotwash" briefing, project officer, rehearsal exercise, leaders' reconnaissance, synchronization matrix and customer handbook development, liaison officer, quartering and advance party compositions, task organization, safety and force protection, and RSO&I.

Hotwash Briefing

Rotations to the major combat training centers (CTCs) begin 540 days out with a timely briefing commonly called a hotwash briefing. The unit that has recently completed the rotation cycle quickly presents a hotwash briefing for the unit scheduled to begin the CTC rotation cycle. This forum is a useful tool to exchange relevant information, techniques applied to doctrinal principles, and lessons learned. Funded attendees are limited. Therefore, when selecting personnel for the hotwash briefing, it imperative to send soldiers who will go on the rotation. This briefing is also a great time to meet the troop-listed unit points of contact (POCs) to start the communications process required to ensure success.

Project Officer

The requirements for the headquarters elements are heavy throughout the rotation cycle. There must be a project officer brought onboard to facilitate coordination, with both higher commands and subordinate units, and serve as the everyday POC. This officer must be able to work with minimum supervision and produce products or requirements on time in a professional manner. This officer must track suspense dates and keep the

command informed. Bottom Line: The command needs one soldier making decisions and commitments who knows the commander's intent. Yes, funding this officer for two years is expensive, but essential to success.

Rehearsal Exercise

Most units will have a rehearsal exercise with actual task-organized units. This benefits not only the warfighters, but also the providers. The rehearsal mirrors the terrain, climate and approximate travel distances to fight and to support the fight as realistically as possible. The JRTC has rehearsal areas at Camp Gruber, OK, and Fort Chaffee, AR. The ISB is mirrored at Camp Gruber, and the maneuver box at Fort Chaffee.

Logistically, the CSBs test their task organizations to build combat power and sustain the maneuver in combat operations. This opportunity clearly shows what works and what does not work. Participants identify challenges and make adjustments so the forces can work effectively and efficiently together. The subordinate units of the 232d CSB were given the operations order (OPORD) before departure. The OPORD allowed the subordinate commands the specific guidance needed for conducting their own military decision-making process (MDMP) at their respective home stations.

A rehearsal exercise and a thorough after action review (AAR) have to be conducted down to the soldier level and consolidated to improve the operation for the follow-on mission at the JRTC. The AAR is probably the single most important document after a rehearsal. For maximum impact for improvement, the AAR must not be "sanitized." Be prepared to offend leadership at all levels. However, work through the issues and the end product will justify the "ugly" AAR.

Leaders' Reconnaissance

The AAR needs follow-up by a thorough leader's reconnaissance conducted at the JRTC. At a minimum, the reconnaissance must include the support operations officer, S4 (Logistics Officer), supply and service officer, and the transportation officer of the ISB CSB. If funding is available, subordinate unit POCs should attend also.

Units must maximize this opportunity to develop sketches, take photographs, receive safety and environmental information, and use a global positioning device to obtain accurate grid coordinates of key locations. The focus must include security and force protection measures in all determinations of terrain management. Terrain management is the key to moving personnel, equipment, and supplies into and out of the ISB. Key areas to be identified are maintenance operations, fuel sites, vehicle staging, work sites, weapons test fire/zeroing area, and aviation operations for both fixed wing and rotary aircraft. An easily overlooked area is host nation support coordination with vendors and service providers. Bottom Line: Come with a plan to confirm and a list of requirements to resource while leaders are on the ground.

After the leaders' reconnaissance, the 232d CSB hosted a briefing for subordinate units. This forum reinforced working relationships and provided an excellent opportunity to further develop the synchronization matrix (sync matrix) and to draft fragmentary orders (FRAGOs) to reflect any changes. The hosting headquarters used this opportunity to gather specific information on subordinate units, develop a suspense listing of all requests for information (RFI), and disseminate requirements and compliance training that unit personnel must conduct before arrival at JRTC. Hosting such a briefing was money well spent.

Synchronization Matrix and Customer Handbook

Two products essential to ISB operations are the sync matrix and the customer handbook. The sync matrix clearly shows the who, what, where and when logistical support is scheduled. Providing large, laminated print copies of the sync matrix to the CSB internal units keeps up visibility and punctuality. The customer handbook identifies POCs, commodity data, site layout, and the ISB operations and procedures. In the example of the

Oklahoma ARNG at JRTC rotation 02-07, developing a quality customer handbook aided both the 45th BCT and visitors.

Liaison Officer

The most overlooked key to success is the customer relationship. From the start, the CSB support operations officer and the BCT S4 must develop a close working relationship to exchange information. Operating "on the same page" will yield up-front work through heavy communication and management, with few surprises during execution. Confidence and credibility are essential for both officers' logistical support plans. These officers must be the main POCs for both organizations to avoid confusion. During the exercise with the 45th BCT, an experienced liaison officer was essential to the changing logistics situation. A liaison officer, who has knowledge of the entire operation and the capabilities of the CSB, is critical to helping the brigade with decisions.

Quartering and Advance Parties

Identifying and assigning key individuals to the quartering and advance parties directly impact the degree of initial success for the CSB and, subsequently, the BCT. Funding is traditionally allocated for these soldiers by the unit's troop-listed strength. With personnel limited by the amount of funding, the teams must be of the highest caliber in both work ethic and overall knowledge of requirements in order to guide the main bodies into the ISB to begin logistical support operations and internal sustainment. Some planning considerations for personnel are licensed drivers for all types of equipment, soldiers on the proper delegation of authority cards, a medic or combat life saver, and a competent decision maker.

Task Organization

Developing the assigned task organization focuses upon communication and rehearsals. Doctrinally, corps- and theater-level CSS organizations are unfixed: tailoring the organization depends on the number of personnel, types, and weapon systems supported. The following is a listing of the task organization of the internal ISB support personnel under the multifunctional 232d Corps Support Battalion:

Headquarters and Headquarters Detachment, 232d CSB	Illinois ARNG
1034th Quartermaster Company	Iowa ARNG
119th Cargo Transfer Company	Active Army
443d Petroleum Supply Company (-)	Montana ARNG
798th Movement Control Team (-)	US Army Reserve
450th Ordnance Company (-)	US Army Reserve
140th Field Services Company (-)	US Army Reserve
1245th Transportation Company (-), Palletized Loading System	Oklahoma ARNG
1120th Maintenance Company (Direct Support)	Oklahoma ARNG
233d Military Police Platoon	Illinois ARNG
1115th Transportation Company (-), Stake and Platform	New Mexico ARNG

The task organization remained virtually intact through the rehearsal exercise and then throughout the JRTC rotation. The CSB made strong bonds with the units, and motivation was high among soldiers mainly because the work was challenging, yet rewarding. The strong customer commitment was evident at all levels. The 232d CSB furnished a fob with its unit crest to all subordinate units/soldiers working in the ISB. The 232d CSB fobs worn on individual uniforms established immediate visual recognition of the ISB force. This recognition provided the BCT with multiple POCs to assist BCT soldiers everywhere.

Safety and Force Protection

Force protection measures were planned and executed throughout the ISB operation. Because rear operations concepts preclude diverting assets needed for close operations, CSS units must protect themselves against all but the most serious threats. The ISB in Alexandria, LA, is fenced with guard towers spaced along the perimeter and placement focused on distance and entry control points. Although the emplacements are fixed, leadership assessments of vulnerabilities and action plans to reduce vulnerabilities need to begin immediately upon arrival. Class IV (construction and barrier materiel) must be forecast and used to improve facilities and force protection. Involvement by subordinate commanders and the Military Police force are essential. Rehearsals focusing on command, staff functions, perimeter sector responsibilities, communications systems, fighting positions, and sectors of fire must be frequent to train up as a battle drill. Quick reaction force (QRF) establishment and training are imperative to base defense. This force effectively augmented the base defense plan and was essential in repelling the threat scenario during JRTC rotation 02-07. Also, the employment of CS units for convoy escort was an essential in the train-as-you-fight concept.

Both stand-up and post meetings were held every day. These meetings kept the seamless logistical support on track. These meetings give the command a feel for the logistics rhythm. The post daily meeting was extremely useful for subordinate commanders to submit the next day's risk assessment. This allowed careful review of the significant activities scheduled by the CSB's executive officer (XO) and command sergeant major (CSM). Risks were reduced hours before the scheduled event. This concept kept the ISB force safe and working.

RSO&I

The *RSO&I* built the 45th BCT's combat power for success in the JRTC maneuver box. How the BCT got there involved extensive planning, training dollars, and soldier sacrifices to make success happen. More than 3,000 soldiers came to the ISB by convoy, bus and aircraft through *reception*. Equipment arrived by rail, barge, convoy, air and commercial line haul through *staging*. The forces, equipment and supplies were put together to build combat power *onward moving* to the tactical assembly areas. Command was relinquished to tactical commanders finalizing the *integration* phase.

JRTC rotation 02-07 employed and then enjoyed many keys to success. Future ISB operators can use these keys to success to provide quality logistical support and effectively build combat power for combat units. The most highly deployed CSB in the ARNG, the 232d CSB continues to deploy worldwide *Supporting Victory.*

CPT Derren Siglock, Illinois Army National Guard (ARNG), is the S2/3 (Intelligence Officer/Operations Officer) for the 232d Corps Support Battalion, Illinois ARNG in Springfield. He has a bachelor's degree in organizational leadership from Greenville College in Illinois. A recent graduate of the Combined Logistics Captains Career Course at Fort Lee, Virginia, he also is a graduate of the Infantry Officers Basic Course, Support Operations Course, and the Air Assault Course.

Logistics Research Papers Online

More than 200 research papers, most written by Quartermaster officers attending Phase II of the Combined Logistics Captains Career Course (CLC3), now appear online. The papers are intended to provide Quartermaster officers and senior noncommissioned officers periodic updates on relevant logistics-related issues, many of which are not yet captured in Army publications. Go to "Logistics Training (LTD)" on the Quartermaster Home Page at www.Quartermaster.army.mil. Go to "Logistics References," then to "Professional Development Articles" and follow the instructions to Army Knowledge Online (AKO).

Logistics Release Point: Preparing for Resupply Operations

MAJ Carlos E. Lopez

Supply company commanders and their subordinate leaders at the Combat Maneuver Training Center (CMTC) in Hohenfels, Germany, routinely face a tough time executing logistics release points (LRPs). This challenge is clear when a unit tries to save time and fails to emphasize troop-leading procedures (TLP) during a battle's preparation phase.

This observed trend stems from the notion that the LRP mission is repetitive. As a result, a unit's overall support plan suffers inevitable shortcomings. This article is intended to help supply company commanders and their subordinate leaders prepare for LRP tasks. Commanders should consider developing and standardizing their own LRP tactics, techniques and procedures (TTP) into unit tactical standing operating procedures (TACSOPs). Effective TACSOPs should contain how-to procedures, specific battle drills, key rehearsals with recommended mission timetables, and precombat check/inspection (PCC/PCI) lists.

FM 4-93.50 (***Tactics Techniques and Procedures for the Forward Support Battalion (Digitized)***) defines an LRP as a "point along the supply route where the supported unit meets the supporting element to transfer supplies." Consider planning alternate LRP sites to increase logistical responsiveness and to have the ability to meet mission-changing requirements because of enemy activity or as operational requirements evolve unexpectedly. Combat service support (CSS) planners and supporting commanders should meet daily with supported units to discuss required changes in LRP time, additional logistical requirements, and locations. This meeting allows accomplishing tasks in the brigade's logistical plan. The following functions are described in **FM 4-93.50** as likely to take place at the LRP and should be considered when planning and preparing an LRP.

LRP Functions

- Synchronization
- Load adjustment and cargo diversion
- Transfer of responsibility
- Updating battlefield intelligence
- Driver briefing/equipment maintenance (PCC/PCI)
- Decision-making (triggers)/command and control (C2) node
- Backhaul of empty flat racks, fuel tankers, transport of recoverable Class IX (repair parts) and other supplies
- Transfer of unit individual replacements
- Human remains transfer

Preparing for the LRP

The support operations officer (SPO) briefs the brigade's concept of support to the supply company commander. The support plan calls for daily forward resupply to the task forces in the brigade area of operation.

The commander must now prepare unit personnel and equipment to support the tactical scenario. When preparing for the LRP mission, use rules for METT-TC (mission, enemy, terrain and weather, troops - time

available and civilians). These METT-TC factors provide direction, help determine how to employ unit assets and how to conduct resupply linkups, thus enabling the task forces to continue to fight forward. Normally, the supply company must be prepared to execute four daily resupply missions. The LRP times will vary depending on the supply requirements. Two LRPs will take place near the brigade support area (BSA), where the supply company receives the main supply battalion's or corps support battalion's push package. The other two LRPs will take place forward of the BSA in a location near the task force supported areas (TFSA).

LRP execution requires critical tactical planning and preparation from the commanders to their subordinate leaders. Using TLP develops, validates and maximizes planning time, while allowing subordinate leaders enough time to prepare for the mission. Many supply commanders find planning, preparing and conducting TLP for the LRP unnecessary because of the mission's repetitive nature. As a result, key events such as rehearsals and PCC/PCI are often omitted. The unit must undergo these preparations to maintain focus and situational awareness on the operation. A suggested tool for the commanders to manage this information is the following TLP matrix.

Troop-Leading Procedures (TLP) Matrix	
TLP Steps	**Commander/Leader Considerations**
1. Receive the mission.	Use METT-TC to analyze the LRP mission (day or night).
2. Issue a warning order.	Use the unit TACSOP to prepare for the operation. Subordinate leaders initiate PCC/PCI.
3. Make a tentative plan.	Develop an estimate of the situation and continue to use the METT-TC factors as the basis of estimates.
4. Start necessary movement.	Ensure subordinate leaders continue their PCC/PCI, such as uploading supplies onto palletized load system (PLS) flat racks, aligning fuel trucks, and distributing ammunition.
5. Reconnoiter.	Conduct a reconnaissance to validate the initial terrain analysis. Adjust the plan and confirm or deny the use of available routes. If available and when possible, include the Military Police (MP) or security forces in this reconnaissance
6. Complete the plan.	Complete the support plan based on the reconnaissance. Ensure the plan supports the mission and logistical requirements
7. Issue the complete order.	Issue an OPORD (written or oral). Use a terrain model to illustrate routes and critical terrain features. Be prepared to rehearse with subordinates
8. Supervise.	Rehearse all essential tasks and coordinate all actions at the LRP. If available, include the security force in this rehearsal. The MP or security force leader discusses actions on enemy contact. Rehearse unit battle drills.

Always brief the overall support concept to the unit and ensure that subordinate leaders have enough time to prepare for their tasks. The supply platoon leader or platoon sergeant, assisted by the commander or company executive officer, prepares an analysis and ensures that subordinates are completing necessary checks before executing the LRP. Following this plan analysis, the platoon leader or platoon sergeant briefs the operation and rehearses it in detail before the departure time. The security force (MPs or the quick reaction force) should always be included at the LRP rehearsal. It is important to discuss actions on enemy contact and displacement plans during the rehearsal because it helps soldiers visualize critical actions and focus on essential tasks that must occur at the LRP. The platoon leader or the security force leader should always lead the discussion for the convoy and the LRP procedures during the rehearsal. An LRP checklist such as the following sample can be used to brief the LRP personnel.

Logistics Release Point (LRP) Briefing - Sample Checklist

1. **Situation**
   - Terrain conditions along the main supply route (MSR); hazardous areas
   - Type, disposition and composition of enemy that may be encountered; the nuclear, biological, chemical (NBC) threat
   - Locations of known or suspected enemy minefields/obstacles

2. **Mission** (who, what, where, when) Include primary and alternate convoy routes.

3. **Execution (Include the LRP rehearsal time.)**
   - Timeline for LRP
   - Staging plan for vehicles (staging plan from the field and return to the LRP site)
   - Speed and distance between vehicles
   - Battle drills (actions on enemy contact); availability of MPs
   - Marking systems for day or night vehicle identification
   - Actions/linkup at the LRP reporting process (voice or digital means)
   - Contingency plan for "no show" units

4. **Service Support**
   - Ammunition distribution to soldiers going to the LRP
   - Availability of combat life savers at the LRP
   - Vehicle breakdown procedures (plan for maintenance recovery vehicles)

5. **Communications**
   - Communications plan for the LRP (frequencies)
   - Key leader locations
   - Completion of risk assessment

Commonly Used Tactics, Techniques and Procedures (TTP)

TTP 1: LRP planners and commanders should brief these key elements:

Who: Review the task organization and support relationships.
What: Specify mission support totals. Address requirements versus capabilities.
Where: Designate initial, alternate and subsequent locations.
When: Specify LRP execution times.

C2: Assign responsibility for the LRP, including the tracking of mission completion. Direct the reporting process and list those in the reporting loop. Provide the platoon leader an intelligence summary before the convoy's departure.
Security: Assign responsibilities for providing LRP security.
Rehearsal: Brief the times, locations, attendees and actions to be rehearsed (battle drills).

TTP 2: During the military decision-making process, LRP locations should be selected by the SPO and brigade S4 (Logistics Officer) and verified by the commander or the platoon leader during the site reconnaissance. The site should be large enough to accommodate convoys moving in both directions under various weather conditions. The LRP site should be located along a well-protected route.

(Continued on next page)

TTP 3: Convoys may continue past the LRP location to the vicinity of supported units. For example, this location could be the TFSA where supplies are transloaded onto customer vehicles or downloaded to the ground. Daily backhaul of supplies should be implemented, as allowable.

TTP 4: If helicopters are available for logistical support, the forward pickup zone/landing zone (PZ/LZ) may be planned at or near the LRP site.

Effective LRP operations require detailed planning and preparation for successful resupply during the execution phase. Commanders who understand and use TLP as a tool are more likely to succeed in the execution of any mission. It is important to remember that a rehearsal is an integral part of the preparation process. Rehearsal reinforces the learning process by repeating unit mission-essential tasks before the operation's execution.

REFERENCES:

FM 4-93.50 (*Tactics Techniques and Procedures for the Forward Support Battalion (Digitized)*), May 2002.
FM 7-8 (*Infantry Rifle Platoon and Squad*), April 1992.
ARTEP 63-146-30 MTP (*Mission Training Plan for the Supply Company*), October 2001.

MAJ Carlos E. Lopez is the Senior Supply Observer/Controller at the Combat Maneuver Training Center, Hohenfels, Germany. He was previously assigned as Commander, Headquarters and Distribution Company (HDC), 204th Forward Support Battalion, 4th Infantry Division, Fort Hood, Texas.

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From the Acting Quartermaster General

highest quality soldiers depart the US Army Quartermaster Center and School to serve in our warfighting units. We still have many soldiers deployed in various missions worldwide. I want to thank you for all you do. You have a tough mission, with little time off, and are separated from your families and loved ones. You are in our hearts and prayers, and we here at Fort Lee will do our utmost to support you in any manner we are able. I look forward to working with all the great soldiers who comprise the Quartermaster Corps. Supporting Victory!

COL William A. Jenks is serving as the Acting Quartermaster General and Acting Commandant of the US Army Quartermaster Center and School, Fort Lee, Virginia, while Brigadier Scott G. West, the 48th US Army Quartermaster General, is deployed during Operation Iraqi Freedom. Most recently, COL Jenks served as Commander of 23d Quartermaster Brigade at Fort Lee. His other past assignments include Firing Platoon Leader, Hawk Battery, 1-44th Air Defense Artillery Battalion, Kunsan, Korea; Platoon Leader, Company Executive Officer and Company Commander, 407th Supply and Service Battalion, 82d Airborne Division, Fort Bragg, North Carolina. He also had assignments as a Petroleum Officer, Logistics Staff Officer and Materiel Management Center Operations Officer, 2d Support Command, Nelligen, Germany; Assistant Inspector General for Training and Logistics, III Corps, Fort Hood, Texas; Deputy Director of Supply, Anniston Army Depot, Anniston, Alabama; Director of Logistics and Combat Support Squadron Executive Officer, 11th Armored Cavalry Regiment, Fulda, Germany; G4 (Logistics), US Army Special Operations Command, Fort Bragg; Logistics Staff Officer, J4, US Special Operations Command, MacDill Air Force Base, Florida; Commander, 262d Quartermaster Battalion, Fort Lee; and Chief, Office of the Quartermaster General, Fort Lee.

Quartermaster Commentary – Critical Supply Company Tactical Tasks

MAJ Paul W. Rodgers

During the past three years as an observer/controller (O/C) at the Combat Maneuver Training Center (CMTC), I learned from many outstanding logisticians who rotated through CMTC at Hohenfels, Germany. With very few exceptions, the supply company personnel were some of the most technically adept professionals in the Army. However, we logisticians seem to consistently struggle with one critical skill: tactical proficiency. If this lack of proficiency is not corrected, this lack will ultimately lead to failure on the battlefield.

According to DA Pamphlet 600-3 (Commissioned Officer Development and Career Management), *Quartermasters must be warfighters who are technically proficient with their branch and mission unique equipment, tools and systems. [Logistical] mission success requires the proper balance between technical skills and the ability to* ***understand and apply the appropriate tactical skills*** *at the right moment.* (Emphasis added.) This ability to strike the "proper balance" between the technical and tactical aspects of battlefield logistics is a challenge for many young supply officers and noncommissioned officers (NCOs). From my observations, nowhere has this challenge been more evident than in the execution of ammunition transfer point (ATP) and logistics release point (LRP) missions at CMTC.

There is one main reason that supply companies have continued to struggle with the tactical elements of ATP and LRP operations at CMTC. Unlike other missions, such as convoy operations for example, many logisticians view ATP and LRP missions as purely logistical in nature. This may be because the tactical tasks of these operations are usually implied and not specified in the typical operations order (OPORD). For example, the typical order usually reads as follows: "A Co - Establish an ATP VIC grid PK 123456 NLT 150330JUNXX in order to issue CL V to 3d BCT in support of its defense of XXXX." Typically, the two critical tactical tasks that are implied are the following:

OCCUPY - A tactical task in which a force moves on to terrain without opposition and controls the entire area (FM 101-5-1, Operational Terms and Graphics).

SECURE - Normally involves conducting area security operations (*operations designed to provide reaction time, maneuver space, and protection to the main body - FM 101-5-1*). A force given the mission of securing a unit, facility or geographical location not only prevents enemy forces from overrunning or occupying the secured location, but also prevents enemy direct fires and observed indirect fires from impacting the secured location (FM 3-90, Tactics).

Because these implied tactical tasks are often overlooked or misunderstood, supply company soldiers are generally neither trained to execute them nor do they develop the battle drills necessary to ensure mission success. A closer look at these two critical tactical tasks will help supply company leaders develop necessary training plans and tactical standing operating procedures (TACSOPs) that will ensure tactical proficiency of their soldiers who provide the critical support to the brigade combat team (BCT).

OCCUPY

It is important to remember that OCCUPY is a tactical task and, as such, should be planned and rehearsed. Too often the supply company will have a detailed plan for the route to and from the ATP or LRP without putting much thought (if any at all) into the occupation of the site. Also, the route is the focus of rehearsals (if they are conducted), and little effort is given the occupation. This is a dangerous trend because occupation is the logistician's equivalent of "actions on the objective" and should be the first priority when considering what to rehearse when time

is limited. (See FM 3-90.1, Tank and Mechanized Infantry Company Team, Paragraph 3-188.) Bottom Line: Occupation should be rehearsed every time. Remember, movement to the site is only 10 percent of the mission; the real work begins with occupation. A well-thought-out and rehearsed plan leads to a smooth occupation and sets the section up for successful security operations. Conversely, poor occupation can lead to delays in the flow of logistics, poor security operations, and possibly mission failure.

Site Selection, Location and Layout

An ATP or LRP is normally part of the brigade support area (BSA). However, selecting the site must be a joint effort between the brigade and forward support battalion (FSB) to be effective. For the most part, the brigade S4 (Logistics Officer), division ammunition officer (for ATPs) and FSB support operations officer working with the FSB S2/3 (Intelligence Officer/Operations Officer) and Company A plans for and establishes ATP and LRP locations. These locations are sited according to factors of mission, enemy, terrain and weather, troops - time available and civilians (METT-TC) within the BSA to support combat operations.

No specific standard configuration exists for an ATP or LRP layout. The layout should be based on the tactical situation and the most functional way to provide support to using units. However, planners should take care to comply with safe handling guidelines.

The following are some layout considerations common to any configuration:

- One entrance/exit point, with consideration for an emergency exit, allows control of unit and corps vehicles and materials handling equipment (MHE).
- A good one-way road network should have room to allow unit vehicles and MHE to operate safely.
- A separate holding area should be available to hold incoming trailers temporarily that cannot be placed immediately.
- To reduce the signature of the ATP or LRP, use terrain features such as vegetation, trees, slopes and valleys for concealment. Special care must be taken not to disrupt the area's natural look.

OCCUPY: A Method

The following is a method for ATP and LRP occupation that I have seen executed with success at the CMTC. I have included it as an example. This is not the only way to execute this task, but it is a good model and can be used as a baseline. The method is modified from the doctrinal method of occupying a patrol base.

- A security element will sweep the ATP or LRP location looking for any signs of recent enemy activity, such as land mines.
- Once the site is determined to be clear, the security element will call forward the ATP or LRP main body, and continue to conduct mounted patrols according to the operations order (OPORD).
- The ATP or LRP section will enter the LRP and ATP at the designated release point (RP).
- The platoon leader leaves a two-soldier observation post (OP)/entrance control point at the RP.
- The platoon moves into the ATP or LRP according to the OPORD and rehearsal.
- The platoon leader and security element leader start at 6 o'clock and verify that OPs and local security elements are in place. If the platoon leader and security element leader find a better location for one of the OPs or local security positions, they reposition it.
- All team leaders verify their team locations and prepare to conduct resupply operations.
- After all team leaders are prepared to conduct operations, they report back to the platoon leader at the CP. The platoon leader then reports to the FSB that the ATP or LRP is established and prepared to conduct operations.
- During operations, the platoon leader maintains communication with the security element, the company command post (CP), the FSB tactical operations center (TOC) and incoming supported and supporting units.

SECURE

As stated previously, the tactical task SECURE normally involves conducting area security

operations (*operations designed to provide reaction time, maneuver space, and protection to the main body - FM 101-5-1*). There are five forms of security operations: screen, guard, cover, area security and local security. The ATP and LRP security operations take the form of local security operations.

One mistake made by young CSS leaders is to assume local security can consist of drivers standing or kneeling next to their trucks with weapons oriented "out." This does not fulfill the requirements of the tactical task to "prevent enemy direct fires and observed indirect fires from impacting the secured location." Also, local security should prevent the ATP or LRP from being surprised, thus providing sufficient reaction time to displace, if necessary, without losing its critical combat service support (CSS) assets.

To accomplish the task of securing the ATP or LRP, the supply company must use both active and passive measures:

- Active measures include security patrols and establishment of OPs. Remember, when placing OPs and establishing patrol routes that the purpose is to provide reaction time and prevent enemy direct fires and observed indirect fires from impacting the ATP or LRP. This is impossible if your local security only consists of a soldier beside each truck.
- Passive measures include using camouflage, movement control, noise and light discipline, and maintaining proper communications procedures.

SECURE: Considerations

The ATPs and LRPs are critical components of the logistics pipeline that enable forces to fight and win. As such, the ATPs and LRPs must be operated as securely as possible. Some considerations when planning security operations for the ATP or LRP include, but are not limited to, the following:

- Vary the time and location of ATP or LRP operation. Remember, the enemy can do pattern analysis too.
- Perform a security sweep of the ATP/LRP site before occupation if outside the protective wire of the BSA.
- Establish and maintain communication with the BSA, supporting units, supported units and your security element.
- Ensure good passive air defense measures (camouflage).

Have contingency plans that are understood by everyone (BSA, supporting unit, supported unit and security element). These contingency plans should address, at a minimum, the following points:

- Where are the alternate ATP/LRP locations? How are all units informed if the ATP must move to an alternate site?
- What will the ATP or LRP do if the BSA is attacked while conducting operations, if outside the protective wire?
- What should inbound supported/supporting units do if the ATP or LRP is attacked?
- How long will the ATP or LRP wait for supported units to arrive before shutting down operations and returning to the BSA, if outside protective wire?
- Will the ATP hold or retrograde ammunition for supported units that do not show up or do not have enough transportation assets on hand?

Tactical Proficiency of Logistics

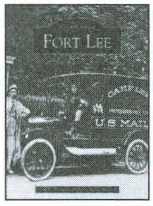
In today's operational environment, tactical proficiency of logisticians is more important than ever. Two tactical tasks common to almost every supply company mission are to OCCUPY and to SECURE. Supply company leaders must develop relevant training plans to ensure proficiency in these two critical tasks. The result of this training should be well-developed techniques and procedures that are incorporated into TACSOPs at the company, platoon and squad level. The time dedicated to training soldiers in these critical tactical tasks will make a tremendous difference in ability to support the BCT during combat operations.

References: FM 4-30.13 (Ammunition Handbook: Tactics, Techniques, and Procedures For Munitions Handlers), FM 7-8 (Infantry Rifle Platoon and Squad), FM 101-5-1 (Operational Terms and Graphics), FM 3-90 (Tactics), FM 10-67-1 (Concepts and Equipment of Petroleum Operations), FM 3-90.1 (Tank And Mechanized Infantry Company Team),

and DA Pamphlet 600-3 (Commissioned Officer Development and Career Management).

MAJ Paul W. Rodgers, who is currently attending Command and General Staff College at Fort Leavenworth, Kansas, recently completed a three-year tour at the Combat Maneuver Training Center, Hohenfels, Germany, where he served as the Senior Supply Company, Forward Support Battalion Observer/Controller. In 1998 he enlisted in the Utah Army National Guard (ARNG) and served with the 625th Military Police Company. While in the ARNG, he earned a bachelor's degree and was commissioned as a second lieutenant, Regular Army. He has served in a variety of positions including Bradley Platoon Leader, Infantry Company Executive Officer and Battalion Motor Officer in an Infantry Battalion; Deputy G4 (Logistics) for the V Corps Artillery, Battalion S4 (Logistics Officer) and Forward Support Company Commander. While in command, he deployed with his company on North Atlantic Treaty Organization (NATO) exercises in Slovenia, Italy, Norway and Hungary. Also, his company deployed operationally to Albania to provide combat service and combat support to United States units in the Albania Area of Responsibility (AOR) in 1999. He is a graduate of the Infantry Officer Basic Course, Combined Logistics Officer Advanced Course, Combined Arms and Services Staff School, Airborne School, Rigger School and the Bradley Infantry Fighting Vehicle Course.

New Photographic History of Fort Lee Published



Fort Lee, a pictorial history by Tim O'Gorman and Dr. Steve Anders, has been published by Arcadia Publishing Company. The 128-page book contains more than 240 photographs of Camp and Fort Lee, Virginia, chronicling its evolution from a National Army Cantonment during World War I, to its reemergence as the Quartermaster Replacement Center and School during World War II, to its establishment as the Home of the Quartermaster Corps, and its continuing role in training soldiers to become Quartermasters.

Dr. Anders has been the Quartermaster Center and School Command Historian since 1984. A graduate of Miami (Ohio) University where he received both his undergraduate and graduate degrees, Dr. Anders serves as an instructor, archivist and member of the command staff at Fort Lee. Tim O'Gorman has been Director of the US Army Quartermaster Museum since 1993. A graduate of the University of Kansas and the University of Idaho, he has worked for more than 20 years in a variety of local, state and federal museums. The authors have drawn from a vast collection of photographs, many of them previously unpublished, in writing *Fort Lee*.

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Commentary - If Reading Is Fundamental, So Too, Is Writing

Neal H. Bralley

While reading is clearly a fundamental component of good communication, a corollary to good reading is effective writing. For years the Army has had an effective writing program designed to improve written communication skills. However, many Army officers still do not write as well as they should or could. Good writing is a fundamental skill for all leaders. Officers and senior noncommissioned officers (NCOs) who cannot write well are not going to effectively communicate their ideas to their readers in a single rapid reading.

Army leaders need to focus on five basic areas to improve writing skills: **spelling, grammar, use of the active voice, proper punctuation** and **proofreading**. If writers simply take time to plan their documents and then a few moments to review their products carefully before going "final," they will often catch many minor errors that may detract from the impact of their writing.

Spelling is important. Readers recognize correctly spelled words more readily and easily than misspelled words. Frequently, writers will use spell-checking features contained within their word processing programs. These spell-checking computer programs work effectively in identifying misspelled words. Spell checkers are fabulous tools, but they will not catch all errors. Spell checkers are less effective in aiding the writer who has used the wrong word for a particular context. Spell checkers do not identify such words as misspelled because these words in the wrong context are not misspelled. A few common examples of such words include the following:

cavalry and calvary	principle and principal
empirical and imperial	tenets and tenants
hear and here	there, their, and they're
its and it's	to, too, and two

Grammar matters. Using good grammar provides quicker, clearer understanding through standardization. Writing is clear when authors follow the normal conventions of the English language. When writers use the wrong forms of irregular verbs, incorrectly punctuate sentences or otherwise use poor grammar, they inhibit their readers' ability to rapidly and correctly understand the writer's intent. English is a complex language, and it presents challenges for even the savviest leader. Leaders benefit by using a good grammar handbook to check their writing. Titles of some good examples include the following: *The Associated Press Stylebook and Libel Manual, The Elements of Style, English 3200: A Programmed Course in Grammar and Usage,* and the *Prentice Hall Handbook for Writers.*

Use the active voice. Verbs in the active voice better convey the writer's intent. Using the active voice within a sentence really falls within the rules of grammar, but the writer's choice of verbs is important in its own right. Writing in the *active voice* is key to enabling readers to fully understand the writer's intent. Using verbs in the active voice enables the reader to know, without doubt, who is responsible for a particular action: the subject of a sentence performs the action. Active voice also, in most instances, reduces the length of sentences while making the sentence clearer to the reader. The active voice construction aids and improves the reader's comprehension. Sentences with verbs in the active voice generally follow a more traditional sentence construction by having a subject, a verb and a direct object. This simple form enables the reader to see who does the action and who is the receiver of the action.

On the other hand, sentences in the passive voice generally do not follow the simpler sentence construction of a subject, a predicate and a direct object. The subject often is not even present in the passive voice, and this often causes confusion for the reader. The writer has not specified who is to take the necessary action. It is critical in military writing to clearly state who is to do what to whom! To do this requires the active voice.

How does the writer recognize sentences in the passive voice? Actually, there are a couple of methods. Some word-processing programs will identify passive construction with grammar-checking functions (often on the tool bar under the "Tools" utility, next to the spelling check function). The sure-fire way to find the passive voice is to look for sentences with some form of the verb *to be* (am, are, be, being, been, is, was or were) followed by a verb ending in *–en* or more often *–ed*. Here are a few examples of the passive and active voice:

Passive Voice: The litter on the street was passed by two privates.
Active Voice: Two privates passed by the litter on the street.

Passive Voice: The commander is briefed daily on the MP blotter report by the chief of staff.
Active Voice: Daily, the chief of staff briefs the commander on the MP blotter report.

Sentences in the active voice focus on who did the action, so these sentences are briefer and thus more easily understood by the reader. There are times when the passive voice may be more appropriate. This may be proper when the subject of a sentence is obvious, unknown, an indefinite quantity, or when it may be best to not name the subject, the doer of the action.

An example of appropriate passive voice: Because of the world situation, all personnel leaves have been cancelled. (The writer may not want to say *who* actually cancelled the leaves.)

One key to writing in the active voice is to write as you speak. It is very difficult for most people to speak in the passive voice. Speakers simply do not do it, because they use pronouns in their sentences. Some in the military feel they should not use pronouns in their writing. Nothing could be further from the truth. The key is to produce clear sentences that a reader can quickly understand. Using simpler sentences with concise words is good. There is no need to produce a 50-cent sentence for a 10-cent idea.

Proper punctuation is critical to reader understanding. The proper use of the comma is a frequent problem for many military writers. There are many instances where commas are appropriate, and there are many cases where using a comma is wrong. This article will address only a couple of instances that frequently and incorrectly appear in military writing. Use commas with coordinating conjunctions (*and, but, for, nor, or, so* and *yet*) when connecting two or more independent clauses within one sentence. **Example**:

Correct: John went to the store, but Jack went home.

Incorrect: John went to work, but stayed late to lock the office.
(This sentence has only one independent clause, thus, it needs no comma.)

If a sentence begins with an introductory subordinate clause, use a comma at the end of the introductory clause. Such sentences may begin with these words: *after*, *according*, *as soon as*, *before*, *having been*, *if*, *in*, *like*, *since* and *when*.

There are many other uses and rules surrounding the comma, but those discussed are among the most commonly abused in military writing. Again, when in doubt, reach for a grammar handbook!

Semicolons are more powerful than commas. When not using a coordinating conjunction (*and, but, or* and *nor*) between two independent clauses, a good writer commonly uses a semicolon between the two independent clauses.

Example: The students' homework was due on Friday; some turned theirs in on Monday.

Also, use a semicolon to separate main clauses connected by a conjunctive adverb (*however, therefore, nevertheless, hence, moreover, otherwise* and *consequently*).

Examples: The soldiers were wet and exhausted; however, the platoon continued to march forward into battle.
The company was late in assembling their vehicles for the road march; consequently, they got a late start on the movement to the railhead.

A writer may, on occasion, use a semicolon before a coordinating conjunction but only when there is significant punctuation in one, the other, or both independent clauses. However, it may often be better to simply break the two independent clauses into two simpler sentences.

When using quotation marks, it is important to properly punctuate sentences with the quotation marks. This is a bit confusing. Commas and periods always go within the quotation marks. Semicolons go outside the quotation marks (unless they are part of the quoted material). The following punctuation marks go outside the quotation marks, unless they are part of the actual quote: the dash, exclamation point, question mark and the semicolon.

Proofread the written product. The final element to improve a written product is to carefully proofread a document before submitting a finished product. Ideally, it is best to let another person read and comment on the writing. By doing so, the writer can expect another proofreader to find errors quickly and easily. However, ensure the proofreader has a critical eye and knows grammar and spelling! While proofreading, eliminate words adding little or no value to sentences. This is very helpful.

When a writer does not have a reliable proofreader, a good alternative is to let the document age for a while, time permitting. Put the document aside for a few hours, or even better a day or so, before proofreading and going final with a finished product. Setting a paper aside and returning to it later usually means a better chance of spotting errors.

Improving writing is not difficult, but it takes practice and work. To write well entails taking care in composing understandable sentences and adhering to the basic rules of grammar. All good writers use dictionaries, grammar handbooks, and judicious use of their associates to assist them in producing documents that readers can understand in a single rapid reading. Officers and NCOs who improve their writing skills become better staff officers, leaders and commanders whose units become more efficient and effective in mission accomplishment. Indeed, good writing is fundamental to effective communication and leadership.

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Hazardous Chemicals and Personnel Protective Equipment

Michael L. Davis
Safety Specialist Assigned to the US Army Quartermaster Center and School, Fort Lee, VA

Worldwide, Quartermaster personnel are using hazardous chemicals to complete their required duties and missions. However, soldiers continue not to use personnel protective equipment (PPE) while working with these hazardous chemicals.

- A group of soldiers all received chemical burns to their hands and arms after cleaning equipment upon return from the field. They had used a non-approved solvent incorrectly. They received no training on hazardous chemicals, no PPE and no supervision.
- While cleaning the barracks, several soldiers received chemical burns. Although none of their injuries were severe, soldiers had not received training on the material being used. Leadership provided no supervision. No PPE was provided as required by the Material Safety Data Sheet (MSDS).

NOT having a complete Hazardous Material Inventory List, NOT using the Material Safety Data Sheet (MSDS), NOT developing and NOT using a risk assessment for an operation, and NOT issuing and using PPE are the biggest mistakes leaders and soldiers make. Remember that budgetary requirements need amendments to meet protective measures, and this includes providing PPE to the soldier or the replacement of required PPE if damaged or destroyed. The MSDS should be the first place consulted for compliance to standards for using chemicals. Remember that the Exposure Controls and Personal Protection Section of the MSDS lists the minimum PPE that personnel must wear. The organization is held responsible for providing this equipment, not the individual.

The Army standard is that soldiers will wear all required PPE while performing the tasks, duties and operations that may expose them to personal injury hazards. Remember that a material designated as a hazardous chemical/risk may require protective equipment and cannot be ignored.

Leaders need to comply with all aspects of the hazardous materials standards and the Army risk management requirement. Often neglected are the identification and evaluation of chemical risks and hazards in the workplace, the preparation of the hazardous substance inventory, and completion of a risk assessment for all mission requirements. Leaders need to develop a file of MSDS on all hazardous chemicals on the inventory and update the MSDS file as the requirements change. Leaders must give personnel access to the MSDS file, ensure proper labels on chemicals, and train personnel with potential exposure to hazardous materials in the workplace. Finally, leaders need to prepare a standing operating procedure for each work area where hazardous chemicals are used or stored, post accident prevention signs and update as necessary.

Although program requirements may vary from organization to organization due to structural or functional differences, leaders ultimately are responsible for implementation and enforcement. Individuals are responsible for their own safety and the safety of those around them.

CAREER NEWS

Professional Development

As Army Transformation continues in the 21st Century, we at the Quartermaster Branch, US Total Army Personnel Command (PERSCOM) will update Quartermasters about some changes, developments and trends in the assignment and professional development areas. **For more information about Quartermaster Corps officer and noncommissioned officer (NCO) issues, access the PERSCOM web site at https://www.perscomonline.army.mil/ and the Office of the Quartermaster General web site at www.quartermaster.army.mil/oqmg/ (Officer Proponency, Warrant Officer Proponency and Enlisted Proponency). Quartermaster warrant officers can access their PERSCOM Quartermaster Warrant Officer Page at https://www.perscomonline.army.mil/OPwod/marquez.htm.** To help enlisted soldiers keep track of PERSCOM's new communication tools, the Enlisted Personnel Management Directorate distributed a wallet-sized information card that lists a soldier's career manager's telephone number, E-mail address, FAX number, and telephone Interactive Voice Response System (IVRS) instructions and telephone number. Enlisted soldiers can get their pocket cards at their personnel servicing battalions. Access **www.us.army.mil** to set up a free E-mail account with Army Knowledge Online.

LTC Promotion Rate, Positive Communication, and Education Waivers for Captains

LTC Tracy Cleaver, Chief, Quartermaster Officer Personnel Management
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Congratulations to all Quartermasters selected for promotion to lieutenant colonel. This is a significant achievement because these promotions are a direct reflection of dedication and hard work. The Quartermaster Corps' selection rate was 80 percent - just slightly higher than the Army average of 79.6 percent.

I continue to urge all of you in the field to maintain communications with your PERSCOM assignment officers. This is especially important when you are approaching 24 to 30 months time on station. Make sure your assignment officer knows what assignments you want so we can add that information into the equation as we enter the permanent change of station (PCS) cycle. We have been very successful getting officers into one of their top three duty locations because of your constant feedback. Please continue the positive communication so we can continue to meet your desires as well as the Army's needs.

PERSCOM's commanding general now has the delegated approval authority for Education Waivers for Promotion to Captain (officers who are/will be eligible for promotion before degree completion). For more details, please refer to PERCOM Online's Quartermaster website under Civilian Education Waivers. This does not mean we disregard the Degree Completion Program (DCP). It is still important to get our officers their degrees as soon as possible, but this will give us breathing room while the Army is deployed across the globe.

Keep up your great deeds for the Army and the Corps. Maintain communications with us here at Quartermaster Branch and we will continue to get the right officer, at the right place, at the right time.

Update Personal Files Regularly, View Quartermaster Branch's Website, and Use AKO

MAJ Timothy D. Brown, Lieutenant Colonel Assignments Officer
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Having only been here a short time, I want to share several things...

- Quartermaster Branch is working hard to meet the needs of the field. We will never be able to satisfy everyone's desires, but we will continue to attempt to meet the needs of the Army and the individual soldier.

- Reviewing and updating your personal files on a regular basis are important. With the availability of online access to your files, there should be no reason for files to be out of date. Also, the importance of having your Department of the Army photo updated every two years cannot be overlooked. Please send PERSCOM two copies!

- Please view and use the Quartermaster website on the PERSCOM Online homepage. It provides valuable information. Also, remember Quartermaster Branch uses Army Knowledge Online (AKO) E-mail as our official way to correspond with you. So, take the time and look at your AKO account or have AKO E-mail messages forwarded to your unit account.

Deployments, FY03 LTC Promotion Board, FY03 CSC Board, Intermediate Level Education, Fellowships, My ORB Online, and Cohort Year Groups

MAJ Keith Sledd, Major Assignments Officer
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Many Quartermasters are currently deployed to support *Operation Iraqi Freedom* or the global war on terrorism. With the release of the unit rotation plan for *Operation Iraqi Freedom*, those not currently deployed soon will be. Currently, 251 of the 530 Quartermaster majors are on assignment orders with report dates between 1 Jun 03 and 31 May 04. For more information about issues important to Quartermaster majors, go online to https://www.perscomonline.army.mil/opqm/Quartermaster%20MAJs%20Assignments%20Officer.htm.

FY03 Lieutenant Colonel (LTC) Promotion Board. Congratulations to all the Quartermaster majors selected for promotion to LTC. While boards review past performance in the selection process, members select officers based on demonstrated potential for service at positions of greater responsibility. Quartermaster officer selections were above the Army average for both the primary zone (PZ) and the above the zone (AZ) categories. The FY03 board results are good news for the Quartermaster Corps because the results reverse a trend of Quartermaster selections below the Army average during the last several years. Released 22 Jul 03, the promotion list is available online at https://www.perscom.army.mil/select/Ltc03.htm.

FY03 Command and Staff College (CSC) Board and Sister Service Schools. The FY03 CSC selection board convened 19 Aug 03 and recessed on or about 19 Sep 03. The FY03 board considered Cohort Year Group (YG) 92 officers for their second look and Cohort YG93 officers for their first look. The list should be released in the Dec 03-Jan 04 timeframe. Officers who want to attend a sister service school (Air Force, Marine or Navy) must write a memorandum listing the desired sister schools and send it to me at Quartermaster Branch, ATTN TAPC-OPG-Q (MAJ Sledd), 200 Stovall Street, Alexandria VA 22332-0416. The CSC Selection Board does not select sister service schools. Quartermaster Branch selects the CSC officers for sister service schools. When the FY03 CSC list is released, Quartermaster Branch will slate officers for sister service schools using nine weighted criteria. The best-qualified Quartermasters are then selected to attend sister service CSCs. This year two officers went to Navy CSC, two officers to Air Force CSC, and one officer to the Western Hemisphere Institute for Security Cooperation (WHINSEC) at Fort Benning, GA. The next Command and General Staff College (CGSC) board from August 24 to September 21, 2004, will be the second look for Cohort YG93.

Intermediate Level Education. Intermediate Level Education (ILE) is the new component of the Officer Education System that provides universal, resident Military Education Level (MEL) 4 education. The program is designed to get all majors in each year group to a resident CSC instead of approximately half a year group

under the current CSC program. The ILE program will send all majors in the Operations Career Field (this includes Quartermaster majors) to a resident MEL 4 school at Fort Leavenworth, KS. Other career fields will attend resident MEL 4 schools but at the satellite locations that best support their career fields. This year the entire CGSC class will use the proposed ILE curriculum as a test. For more information, visit the ILE website at http://www-cgsc.army.mil/DAO/ile/mission.asp.

The first portion (August-December) of the ILE program, called the Common Core Curriculum, will be completed by all career fields. Review the latest proposal for the ILE Common Core Curriculum at http://www-cgsc.army.mil/DAO/ile/ILE_common_curriculum.jpg. The second portion (January-May) of ILE is the Advanced Operational Warfighting Course (AOWC). Only Operational Career Fields (this includes Quartermaster majors) take the AOWC. Review the AOWC curriculum at http://www-cgsc.army.mil/DAO/ile/AOWC_overview.jpg.

Fellowships. Application deadlines for three fellowship programs are due during the next several months. These are the White House Fellowship, Congressional Fellowship, and Rand/Arroyo Fellowship.

- **White House Fellowship.** Interested officers must have their DA Form 4187 (Personnel Action) and active duty service obligation (ADSO) statement to me no later than 14 Jan 04. The board will convene June 2004 for selecting fellowships that begin in September 2004. The President's Commission on White House Fellows annually selects exceptionally promising individuals from all sectors of American life to serve as White House Fellows. Fellows write speeches, help review and draft proposed legislation, answer congressional inquiries, chair meetings, conduct briefings, and otherwise assist high-level government officials. They are assigned to work with senior White House officials, cabinet secretaries, and other deputies.
- **Congressional Fellowship.** Interested officers must have their DA Form 4187 and ADSO Statement to me no later than 7 Oct 03. The board will convene 2-4 Dec 03 to select Congressional Fellows. This program is designed to educate and train selected Army officers and civilians in congressional activities, emphasizing Department of Defense issues.
- **Rand/Arroyo Fellowship.** Interested officers must have their DA Form 4187 and ADSO Statement to me no later than 22 Sep 03. Headquarters, Department of the Army announces the FY04/05 Arroyo Center Fellowship. The Arroyo Center is the Department of the Army's federally funded research and development center for studies and policy analyses. This division of the Rand Corporation supports the Army as an independent nonprofit organization devoted to national security research.

My ORB Online. The new online Officer Record Brief (ORB) website is operational. Officers can now go to the My ORB link at https://isdrad15.hoffman.army.mil/SSORB/ and view or print their ORBs. Obtain access with your AKO login and password. Officers cannot edit the file but can see what corrections need to be made and then go to their personnel servicing battalions (PSBs).

You can only view or print a regular ORB. You cannot view or print a *board* ORB. You must still go to your PSB for a *board* ORB. The first time you access and log in, you may receive an error. If this happens just close your web browser and retry. My ORB is a great tool that allows you to print your ORB whenever you need it. It is also an excellent tool to help prepare for upcoming boards. You can print your ORB and then compare the information in your Awards and Decorations Section to your Official Military Personnel File (OMPF) to make sure all citations are present for awards (Army Achievement Medal and above), plus orders for skill badges.

Cohort Year Group. Several officers have noticed that the Year Group (YG) shown on their ORB in the Basic Year Group (BYG) block has changed. This has caused confusion among some officers and commands. Earlier this year, a software update to the database of the Total Officer Personnel Management Information System (TOPMIS) II changed the year shown from Cohort Year Group to Basic Year Group. For many officers, these two year groups are the same, but for other officers they are different. The BYG block on your ORB now

shows the fiscal year that you started active duty. This is not necessarily your Cohort Year Group that determines when you are eligible for boards and is used by commands as one criterion for slating majors to branch-qualifying jobs.

Your Cohort Year Group is determined by your date of rank. You can verify your Cohort Year Group with the following chart. (For example, if your date of rank (DOR) to MAJ is 1 June 1999, then your Cohort YG is 1988 and your primary zone (PZ) board for LTC meets in February 2004 and your first look for battalion command is in October 2004.)

Cohort YG Table			
DOR to MAJ	**COHORT YG**	**PZ to LTC**	**BN Command Board**
20020902 to present	1992	Feb 2008	Oct 2008
20010602 to 20020901	1991	Feb 2007	Oct 2007
20000602 to 20010601	1990	Feb 2006	Oct 2006
19990702 to 20000601	1989	Feb 2005	Oct 2005
19981002 to 19990701	1988	Feb 2004	Oct 2004
19980102 to 19981001	1987	Feb 2003	Oct 2003

Assignment officers at PERSCOM have asked for the Cohort Year Group to be added to the ORB. That recommendation is under review.

Current Assignment Cycle and Tracking Systems

CPT Todd Bertulis, Branch-Qualified Captain Assignments Officer
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I recently updated the branch website for branch-qualified captains on PERSCOM Online which now displays the "QM Captain's Information Matrix." The matrix lists hyperlinks to different websites that provide information on everything from how the assignment process works to the Department of Defense's daily Early Bird publication. Check it out. If you have any suggestions on how I can improve the website, please E-mail me.

The assignment cycle for Summer 2004 is now the focus of our attention with report dates from June to September 2004. I completed the first phase of the process in July 2003 by finalizing my list of eligible officers to move next summer. When validation is complete, I will receive a slate of requisitions for the Quartermaster population of branch-qualified captains. This slate will include Quartermaster Branch basic requirements (92Z), multifunctional logistician requirements (90A), and branch-immaterial assignments (O1A). I will send another mass E-mail to all eligible officers and post an announcement on the website when I receive the list of requisitions for next summer.

Once the list is published, I will begin collecting information about each officer's top six preferences for the Summer 2004 cycle requisitions. E-mails to me listing your wishes will be used as the primary communication system. Quartermaster Branch will continue to support these programs: Logistics Executive Development Course/ Florida Institute of Technology (LEDC/FIT), Training With Industry (TWI), Advanced Civil Schooling (ACS), and the US Army Military Academy (USMA). A select few officers will be released to work in their functional areas in Summer 2004. If interested in these programs or career options, please refer to the information posted on the website.

ORB/Photograph/Microfiche Maintenance. File maintenance is easier than ever. It is never too early to prepare your file for an upcoming promotion or selection board. You can now review your performance file, update your assignment preferences, and access your ORB and current DA photograph all at PERSCOM Online. For captains approaching their majors board, I recommend referring to PERSCOM's systems online now and beginning the process of preparing for success. Go to your PSB to ensure your ORB is updated. Some of the key areas that officers forget to update are their physical, point of contact information, and their Periodic Reinvestigation for Security Clearance. I also recommend having your official photograph retaken four to six months before any DA board, after promotions and after a PCS.

If you need to have anything added to your microfiche, send additions directly to PERSCOM's Microfiche Division: Commander, PERSCOM, ATTN: TAPC-MSR-R, 200 Stovall Street, Alexandria, VA 22332-0444 or FAX the request and documents to (703) 325-5204 or DSN 221-5204. You can also request a new copy of your file by E-mail, but only if your name is part of your E-mail address. Remember, you can access your OMPF through Army Knowledge Online (AKO). For more information on file maintenance or board preparation, please go to the branch-qualified captains' website at PERSCOM Online.

Promotions to Captain, Microfiche Document Requirements, and Officer Record Briefs

CPT Manu Yasuda, Lieutenant/Non-Branch Qualified Captain Assignments Officer
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Promotions to Captain. A selection board will convene on or about 4 Nov 03 to consider first lieutenants for promotion to captain. Officers eligible for consideration have the following active duty dates of rank, according to MILPER MESSAGE #03-231:

Above the Zone	Promotion Zone
31 Mar 02 - and Earlier	1 Apr 02 - 31 Mar 03

Now is the time to prepare for your primary zone promotion board to captain. The board reviews the following three items during the promotion process:

- **Microfiche.** The board members will not review paper copies of your Academic Evaluation Reports, Officer Evaluation Reports (OERs) or awards. These documents should all be placed on your microfiche in chronological order. Order your microfiche early and review it for accuracy. Send additions and deletions directly to the Officer Records Branch microfiche section. FAX to DSN 221-5204 or (703) 325-5204. Please recheck your microfiche to ensure all documents have been added.

- **Officer Record Brief (ORB).** Update you ORB! Carefully review your assignment history, military and civilian education, last OER and official photograph date. Have your PSB print a copy of your *board* ORB. Sign and date the correct ORB at the bottom of the page in black ink. You must mail the ORB with the original signature to PERSCOM, TAPC-OPG-Q (Frances Morris), 200 Stovall Street, Alexandria, VA 22332-0416. FAXes and photocopies of the ORB *WILL NOT* be placed in your promotion file. Original signatures are a must.

- **Official Photograph.** Take a friend with you to inspect your uniform and appearance before taking your Department of the Army photograph. Common mistakes include wearing awards in the wrong order and wearing airborne and air assault wing backings. Do not wait until the last minute to submit your official photograph. Mail photographs to PERSCOM, TAPC-OPG-Q (Frances Morris), 200 Stovall St., Alexandria, VA 22332-0416.

Two Frequently Asked Questions

If I volunteer for a tour in Korea, am I guaranteed my top choice of assignments upon return to the United States?

Each officer should determine his or her top three preferences and annotate them on a DA Form 4187. The PERSCOM assignment officer will work with PERSCOM's Distribution Division to assign Quartermaster officers to one of their top three choices or find a suitable alternative. The sooner I know your preferences, the more likely I can meet your needs.

How can I add, change, delete items on my ORB?

Bring items to be added or changed to your local personnel servicing battalion.

Warrant Officer Advanced Course, Short Tour Credit, Automation Tools, and Accessions

CW4 Gary A. Marquez, Career Manager for Quartermaster Warrant Officers
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Hundreds of Quartermaster warrant officers are proudly demonstrating our *Supporting Victory* motto throughout Iraq, Kuwait, Afghanistan, Africa and other faraway places, while still others have been extended in Korea and Germany supporting this fast-moving, transforming Army. I salute you all - from the WO1 property book officer who recently graduated from the basic course, hit Fort Campbell, KY, and then deployed to Iraq after two weeks on the ground to the CW5 food service advisor who is moving mountains of rations through ports from Afghanistan to Kuwait.

Presently, Quartermasters have 80 CW3s selected from the 2001 and 2002 promotion boards who have yet to attend the Warrant Officer Advanced Course (WOAC). Projected numbers of CW2 promotables and those already promoted to CW3 who will have to attend WOAC are 170 to 190. Roughly 150 warrant officers train at Fort Lee, VA, in a given year, so there will be a shortfall of 20 to 40 seats.

Attending WOAC is important for several reasons. Two are most important. First, warrant officers receive quality training for 10 weeks on staff functions, officership and technical updates. Second, warrant officers attain the Military Education Level (MEL) Code of 6. For those CW3s who will enter the zone of consideration for CW4 in 2004, it is critical that they attend WOAC in 2004. Yes, the Quartermaster Corps still has some CW3s who - through no fault of their own - have failed to attend WOAC. Yes, the Corps still has some CW3s selected from the 2002 board who - through no fault of their own - have failed to attend WOAC and are fast approaching the zone of consideration for CW4 in 2005. These two year groups must attend WOAC on a priority basis, ahead of selectees from this year's board.

There are exceptions that mainly boil down to timing, availability and whether or not a command will release an officer. A warrant officer deferred from 2001 and 2002 should begin planning to attend WOAC in 2004. Such warrant officers must inform their chains of command. Once a firm or desired date is confirmed, inform me of your date. I will do everything that I can to get you into the WOAC, but you must plan now.

The following are the WOAC course dates for 2004: *Class 001: February 8-April 22; Class 002: May 2-July 16; and *Class 003: September 26-December 10. (*921A for these two periods only.)

Short Tour Credit. As soon as the Army G1 (Personnel) publishes tour lengths for the areas involved in *Operation Iraqi Freedom* and *Operation Enduring Freedom,* PERSCOM will be able to answer the dozens of questions from deployed warrant officers. Be patient, answers are coming.

Several warrant officers have questioned the method of assignment lately, especially for those who have been deployed, returned to home station and now are making a permanent change of station (PCS) to a location outside the continental United States (OCONUS). These are the rules of engagement: The Army G1 approves revocation of PCS orders and only on a case-by-case basis. While one warrant officer is extended in Korea, Turkey or Egypt for 16 to 20 months, another has been deployed in Kuwait or Afghanistan for up to 12 months. Who will be the backfill for that warrant officer in Korea? That same officer who has spent 18 months in Korea now finds himself on orders for Fort Campbell and upon arrival is sent packing for *Operation Iraqi Freedom*. There are hundreds of deployed Quartermaster warrant officers, lots of moves, sacrifices and lots of time away from loved ones. There is no simple plan, but in the end the mission will be completed and soldiers will be supported.

Automation. Several great automation tools are now available to soldiers throughout the world. All of these very useful tools require logging in with your Army Knowledge Online (AKO) account user identification and password. You will be amazed at how much information you can view about yourself! *My ORB, MY PERSCOM, MY PAY, DAPMI* - the list goes on and on. It's all right there. Everyone who uses these tools will be that much closer to maintaining impeccable personnel files, being ready for promotion boards and being prepared for the future.

Accessions. Quartermasters have seen significant increases in recruiting mission numbers for all Quartermaster military occupational specialties (MOSs) in the past three years. This will likely continue. We should all be on the lookout for those young, talented and energetic noncommissioned officers who will take our place some day as warrant officers. Gone are the days of ascending to the rank of sergeant first class with 14 years of service and then deciding to become a warrant officer, which is too late in the life cycle. The optimum tie-in service is between five and eight years at the rank of staff sergeant (E6).

Canvass your formations, your supply rooms, motor pools, warehouses, material management centers and dining facilities; and you will find that raw talent. You will discover soldiers with potential to become warrant officers. However, you have to be on the lookout. Do not just sit back and wait for them to come to you. You must seek them out, mentor them and coach them. You should make a personal goal of recruiting at least one soldier per year who will at least apply for selection as a warrant officer. If you need assistance on how to recruit, read the *Warrant Officer Newsliner,* seek out a senior mentor or contact me at PERSCOM.

Drill Sergeant (Skill Qualification Identifier X)Program

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To be eligible for the Drill Sergeant Program, all noncommissioned officers (NCOs) must meet the prerequisites outlined in AR 614-200 (Enlisted Assignment and Utilization Management), Chapter 8, Sections 8-14. PERSCOM conducts a thorough background screening of unfavorable information about drill sergeant candidates. NCOs with a Type I report of unfavorable information disqualifiers will be excluded from drill sergeant duty permanently. NCOs with a Type II report of unfavorable information disqualifiers will be excluded for consideration for drill sergeant duty for five years from the date of the incident. On average, it takes two personnel files to fill one drill sergeant slot. Currently, the Quartermaster Branch is authorized 157 drill sergeant slots.

Drill Sergeant School Course (DSSC). Once selected, a drill sergeant candidate attends the DSSC for nine weeks, resulting in award of the "X" skill qualification identifier. Upon graduation, a drill sergeant will serve a minimum tour of two years with an option to extend up to a maximum of one year.

Follow-on Assignment/Assignment Preference Program. Upon successful completion of drill sergeant duty, PERSCOM is committed to assign former drill sergeants to one of their assignment preferences. Drill sergeants must post their preferences for follow-on assignments in PERSCOM's Assignment Satisfaction Key (ASK) at https://www.perscomonline.army.mil/. Career branches will grant one of a drill sergeant's three assignment choices if a valid requirement exists or will negotiate with the drill sergeant for an alternate location. Keep in mind that drill sergeants are not assigned to a short tour (dependent-restricted) overseas immediately following tour completion unless they volunteer for such an assignment.

Incentives. A comparison of Armywide promotion data to current/former (current/former soldiers with Skill Qualification Identifier X) drill sergeant promotion data shows the following results:

Drill Sergeant Promotions

Total Army Selection Rate = 30%, 33% primary zone (PZ) and 24% secondary zone (SZ)

Total Drill Sergeant (current/former) Selection Rate = 52%, 52% PS and 49% SZ

Comparing the Total Army Selection Rate for promotion to the Total Drill Sergeant Selection Rate for promotion shows that NCOs who performed well in drill sergeant duty (in a job outside of their primary military occupational specialty) enhanced their promotion potential.

For Quartermasters in Career Management Fields (CMF) 77 and 92, the promotion data shows the following results in percentages:

Drill Sergeant Promotions for Quartermasters*

CMF 77 Total Army Selection Rate = 13% PZ and 16% SZ
CMF 77 Current/Former Drill Sergeant Selection Rate = 30% PZ and 43% SZ

CMF 92 Total Army Selection Rate = 32% PZ and 29% SZ
CMF 92 Current/Former Drill Sergeant Selection Rate = 58% PZ and 76% SZ

***Important Note: These Quartermaster percentages reflect the results of the Sergeant First Class Promotion Board of May 2003, before CMF 77 and CMF 92 combined into CMF 92, effective 1 Oct 03.**

How To Volunteer for Drill Sergeant Duty. To volunteer, update your special duty area in ASK online. Submit a DA Form 4187 (Personnel Action) and application packet volunteering for drill sergeant duty according to Army Regulation 614-200, Chapter 8. This Army regulation also outlines the qualification criteria for drill sergeants and the documents that must accompany an application.

VISION

The Quartermaster Corps – The Warfighters' Logistician today and into the 21st Century!!

- **Logistics Warriors: Technically and Tactically Proficient.**
- **Exploiting Technology, Situation Understanding, Logistics Automation, and Distribution Agility to Anticipate and Provide Precision Logistics.**
- **Replacing Logistics Mass with Logistics Velocity.**
- **Reshaping the Way the Quartermaster Corps Supports and Sustains Army XXI and Army After Next, and the Warfighting CINCs.**

QUARTERMASTER UPDATE

2003 Supply Excellence Awards. In the 18th year of competition, the 2003 Chief of Staff, Army, Supply Excellence Award (SEA) Program recognized 55 units and 26 individuals for logistical readiness and supply effectiveness. This year 113 units participated. Locations of nominated units ranged from Korea, Japan, Germany, Italy, Guam and Belgium to 25 of the 50 United States.

The Department of the Army and the National Defense Industrial Association (NDIA) sponsored an awards ceremony 20 Aug 03 in Alexandria, VA. The Army G4 (Logistics) presented plaques to unit representatives. As in previous years, the NDIA provided the plaques. Also, a banquet 19 Aug 03 honored the individual Best of the Best winners in 10 categories. The individuals were selected after onsite evaluations of their supply knowledge and performance.

Units have nine levels of competition. Evaluators from the US Army Quartermaster Center and School, augmented by Army National Guard and US Army Reserve evaluators, travel worldwide from January through June conducting onsite assessments. Competition begins with major Army commands (MACOMs) nominating units based on their performance in the local Command Supply Discipline Program (CSDP) inspections. Strict adherences to both the Army's CSDP and to logistics management are the stepping stones to competing in the SEA Program.

The SEA Program provides a positive incentive for extraordinary unit and organization supply and supply support operations. To participate, a unit can contact its MACOM SEA point of contact (list available online at AKO>Collaborate>TRADOC>Quartermaster>Supply Excellence Award) for details on the FY04 SEA nomination/competition process. More information about the SEA Program is available at that Army Knowledge Online (AKO) page and online in an article published in the Spring 2003 edition of the *Quartermaster Professional Bulletin* on the Quartermaster Home Page at www.Quartermaster.army.mil under Professional Bulletin.

Chief of Staff, Army, Supply Excellence Award Program

Best of the Best Individual Winners for 2003

Category	Active	Army National Guard	U.S. Army Reserve
Property Book Officer	CW2 Kevin E. Comer	SFC John W. Pawlowicz	CW3 Ronald L. Kissee
S4/Property Book NCO	SFC Douglas L. Adams	SFC Ray A. Toups	MSG Ricky Hamrick
Unit Supply Sergeant	SGT Ulander Garcia	SSG Thomas M. Queen	SSG Dana Lyon
Supply Specialist	SGT Anusha V. Hutchinson		SPC Eva C. Slate
Armorer	SGT Joseph R. Young	SGT David P. Bouse	SSG James Persinger
Stock Record Officer	CW3 Lorenza Wills	WO1 Rolando Domingo	SFC Louis Merritt
Forward Distribution Point (FDP) (NCOIC)	SSG Douglas Whittaker	SSG Amanda Camden	
Stock Control	Carmen Civarelli	SFC Deba Rigor	
Storage NCOIC	SSG Ganege Dayprema	SFC Robert White	
Warehouse Specialist	SGT Stephanie Washington-Garner	SPC Lovell Manes	Michael L. Goodman

Unit Winners and Runners-Up for 2003			
CATEGORY	**COMP**	**STANDING**	**UNIT**
MTOE Level I (A) with Property Book	Active	Winner	HHD, 115th MI Group, Schofield Barracks, HI (INSCOM)
		Runner-Up	HHD, 59th Signal Bn, Fort Richardson, AK (NETCOM)
		Honorable Mention	HHC, 8th Military Police Bde, Yongsan, Korea (EUSA)
MTOE Level I (B) without Property Book	Active	Winner	58th Signal Company, Stuttgart, Germany (NETCOM)
		Runner-Up	B Company, 29th Signal Bn, Fort Lewis, WA (FORSCOM)
		Honorable Mention	69th Transportation Co, Mannheim, Germany (USAREUR)
MTOE Level II (A) with Property Book	Active	Winner	205th Military Intelligence Bn, Fort Shafter, HI (INSCOM)
		Runner-Up	95th Military Police Bn, Mannheim, Germany (USAREUR)
TDA Level I (Small)	Active	Winner	Aviation Technical Test Center, Fort Rucker, AL (ATEC)
		Runner-Up	235th Base Support Bn, Ansbach, Germany (USAREUR)
TDA Level II (Large)	Active	Winner	527th Military Intelligence Bn, Camp Humphreys, Korea (INSCOM)
		Runner-Up	2d Bn (SHORAD), 6th ADA Bde, Fort Bliss, TX (TRADOC)
		Honorable Mention	Army Institute of Research, Walter Reed Medical Center, Silver Spring, MD (MEDCOM)
FDP Level I (A) Small MTOE Class IX	Active	Winner	C Co, 123d Aviation Regiment, Fort Wainwright, AK (USARPAC)
		Runner-Up	558th Tn Co, Floating Craft GS, SSA, Fort Eustis, VA (FORSCOM)
FDP Level II (A) Medium MTOE Class IX	Active	Winner	98th Maint Co, Fort Richardson, AK (USARPAC)
		Runner-Up	3d Maint Co, SSA, 1/43d Air Defense Artillery, Suwon, Korea (EUSA)
		Honorable Mention	A Co, 101st Fwd Spt Bn, SSA, Fort Riley, KS (FORSCOM)
FDP Level II (B) Medium Class II, IV, VII	Active	Winner	305th Quartermaster Co, Yongsan, Korea (EUSA)
		Runner-Up	A Co, 701st Cbt Spt Bn (Main), 1st ID (Mech), Kitzingen, Germany (USAREUR)
FDP Level II (C) Medium TDA	Active	Winner	20th Spt Gp, Supply Point 60, Waegwan, Korea
		Runner-Up	HHC, 22d Area Spt Gp (ASG), Vicenza, Italty (USAREUR)
FDP Level III (A) Large MTOE Class IX	Active	Winner	B Co, 172d Spt Bn, Fort Wainwright, AK (USARPAC)
		Runner-Up	D Co, 702d Main Spt Bn, Camp Casey, Korea (EUSA)
MTOE Level I (A) with Property Book	ARNG	Winner	G Co, 185th Aviation, Meridian, MS (Region II)
		Runner-Up	229th Engineer Det (U), Kingwood, WV (Region IB)

CATEGORY	COMP	STANDING	UNIT
MTOE Level I (B) without Broperty Book	ARNG	Winner	D Troop, 1/221st Cavalry, Las Vegas, NV (Region IVB)
		Runner-Up	HHD, Engineer Bde, 42d Infantry, Buffalo, NY (Region IA)
MTOE Level II (A) with Property Book	ARNG	Winner	HQ, 2d Bn, 194th Armor, Duluth, MN (Region IIIA)
		Runner-Up	1/201st Field Artillery Bn, Kingwood, WV (Region IB)
MTOE Level II (B) without Property Book	ARNG	Winner	1088th Engineer Bn (Heavy Div), Plaquemine, LA (Region IIIB)
		Runner-Up	771st Troop Command, Charleston, WV (Region IB)
TDA Level I (Small)	ARNG	Winner	HQ, 209th Regional Training Institute (RTI), Ashland, NE (Regional IIIB)
		Runner-Up	772d Aviation Troop Command, Williamstown, WV (Region IB)
TDA Level II (Large)	ARNG	Winner	Training Support Unit (TSU), Little Falls, MN (Region IIIA)
		Runner-Up	Headquarters, State Area Command (STARC), Jackson, MS (Region II)
FDP Level I (A) Small MTOE Class IX	ARNG	Winner	B Co, 193d Aviation (AVIM), Wheeler Army Airfield, HI (USARPAC)
FDP Level II (A) Medium MTOE Class IX	ARNG	Winner	U.S. Property and Fiscal Office, Supply Center, Lincoln, NE (Region IIIB)
		Runner-Up	U.S. Property and Fiscal Office, S&S Div, Douglas, WI (Region IIIA)
FDP Level III (A) Large MTOE Class IX	ARNG	Winner	U.S. Property and Fiscal Office, S&S Fwd Dist Point, Springfield, IL (Region IIIA)
		Runner-Up	U.S. Property and Fiscal Office, Camp Beauregard, Pineville, LA (Region IIIB)
FDP Level III (B) Large MTOE Class II, IV, VII	ARNG	Winner	Director of Logistics Warehouse, Little Falls, MN (Region IIIA)
MTOE Level I (B) without Property Book	USAR	Winner	C Co, 411th Engineer Combat Bn (Heavy), Guam (USARPAC)
		Runner-Up	411th Quartermaster Co, Brockton, MA (FORSCOM)
MTOE Level II (A) with Property Book	USAR	Winner	6/52d Aviation Regiment, Los Alamitos, CA (FORSCOM)
MTOE Level II (B) without Property Book	USAR	Winner	320th Ordnance Bn, Lincoln, NE (FORSCOM)
		Runner-Up	407th Civil Affairs Bn (GP), Arden Hills, MN (USASOC)
TDA Level I (Small)	USAR	Winner	1102d Garrison Support, Fort Richardson, AK (USARPAC)
		Runner-Up	SETAF Augmentation Unit, Vicenza, Italy (USAREUR)
		Honorable Mention	4212th U.S. Army Hospital, Kingsport, TN (FORSCOM)
TDA Level II (Large)	USAR	Winner	HHC, 7th Army Reserve Command, Schwetzingen, Germany (USAREUR)
		Runner-Up	Equipment Concentration Site 43, Forest Park, GA (FORSCOM)
		Honorable Mention	3747th Multi-Functional Training Bde, Grafenwohr, Germany (USAREUR)
FDP Level I(C) Small TDA	USAR	Wiinner	758th Maintenance Co, Whitehall, OH (FORSCOM)
		Runner-Up	245th Maintenance Co, SARSS-1, St. Louis, MO (FORSCOM)

PWD Trained Naval Reservists Who Played Unexpected Role in Iraq

Ten Navy reservists from Texas who deployed to support *Operation Iraqi Freedom* after training at the Petroleum and Water Department (PWD), US Army Quartermaster Center and School, Fort Lee, VA, helped set the all-time record for fuel delivery for all British Royal Air Force bases. Every three years, fuels operating companies in US Navy Reserve supply support battalions come to the PWD for combat-ready certification. Assessments include realistic training scenarios in fuel operations with Army, Navy and Marine equipment, as well as combat skills.

The 10 members from Naval Reserve Supply Support Battalion 1 (SSB1), Fuels Company I of Naval Reserve Center Fort Worth received their notice to deploy last winter on emergency two-week annual training period. Another supply unit that had been scheduled for deployment to the island of Cyprus in the Mediterranean was unable to mobilize, so SSB1 answered the call to duty that led the Navy reservists to fill one of the most mission-critical roles early in *Operation Iraqi Freedom*: keeping coalition aircraft fueled over Iraq. During the coalition's bombing campaign, a US Air Force colonel personally asked each of the 10 Texans in SSB1 Fuels to volunteer to extend the original two-week orders for an additional 29 days.

Upon arrival last February 17 at the British Royal Air Force's Cyprus Service Support Unit, SSB1 Fuels learned that the British forces had recently completed the construction of the largest Tactical Fuel Handling Equipment (TFHE) System ever constructed by the United Kingdom. The TFHE had 29 fueling distribution points distributed over five airfields that supported a main runway. Members of the Royal Air Force and the British Army staffing the TFHE were mostly junior in rank with little or no fueling experience. During their first two weeks in Cyprus, members of SSB1 Fuels trained their British counterparts. They also helped reconfigure portions of the system to accommodate large aircraft and maximize the TFHE capabilities.

As the end of the two-week orders for SSB1 Fuels neared, Turkey announced its refusal of coalition requests to use Turkish facilities in support of operations in Iraq. Coalition war planners then made a tactical shift to transfer the bulk of all aircraft refueling operations to Cyprus. In Cyprus, the additional personnel required to operate the TFHE had not yet arrived. In a highly irregular arrangement, the US Air Force provided funding directly to the Naval Reserve, along with a request naming the 10 members of SSB1 Fuels. In the early morning hours of 20 Mar 03, *Operation Iraqi Freedom* began. Fueling operations in Cyprus escalated to 15-hour workdays.

Most fueling needs came from US and British KC-135 tanker planes that provided inflight fueling to coalition aircraft operating over Iraq. On the busiest day - the record-setting day - more than 845,000 gallons of fuel were safely delivered to support 55 tanker sorties. Also, the TFHE recorded no significant spills, leaks or equipment malfunctions during the SSB1 Fuels entire deployment.

In Summer 2003, three more US Navy Reserve units completed Status of Resource and Training System (SORTS) validation at the US Army Quartermaster Center and School. Personnel in the PWD at Fort Lee assessed the unit readiness for Company H, SSB1 of San Diego, CA; Company H, SSB2 of Oklahoma City, OK; and Company I, SSB3 of Jacksonville, FL. Each two-week SORTS validation includes operating Army, Navy and Marine equipment as well as combat skills certification. The Navy is responsible for certifying these units as ready for mobilization. The Expeditionary Logistics Support Force, headquartered at Cheatham Annex, commands the 10 US Navy Reserve supply support battalions. – Information from Ensign Shane Linkous, Navy Information Bureau Southwest 111, Fort Worth, TX; and Senior Chief Wilkin Sherrod III, US Navy, Advanced Petroleum and Water Division, PWD, US Army Quartermaster Center and School.

Message to Quartermaster Leaders

The Quartermaster Corps needs your assistance for a successful FY04 functional review. Please submit your issues along with your assessed impact and proposed solution, your name and telephone number to the Office of the Quartermaster General. A response form is available online at www.quartermaster.army.mil/oqmg/officer_proponency/functional_review.htm

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Doughboys of Co C, 112th Infantry (PAARNG), prepare to go "Over the Top" near Chateau Thierry, France, 18 July 1918.

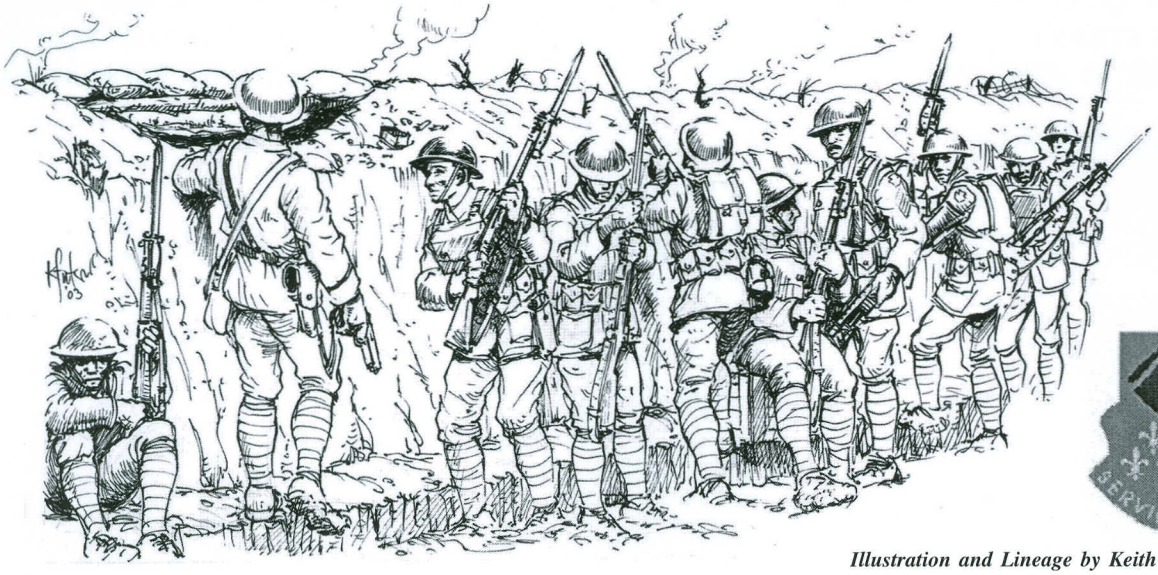

Illustration and Lineage by Keith Fukumitsu

728th Main Support Battalion
"Pride of the State"

Organized 27 July 1878 in the Pennsylvania Army National Guard (PAARNG) as the Franklin Guard, at Chambersburg, PA.
Redesignated 11 October 1878 as Company C, 8th Infantry. Disbanded 19 June 1884 at Chambersburg, PA.
Reconstituted 5 September 1884 as Company A, 3d Brigade, and organized at Chambersburg, PA.
Redesignated 3 June 1887 as Company C, 8th Infantry.
Mustered into Federal Service 12 May 1898 at Mount Gretna, PA, for the War with Spain as Company C, 8th Pennsylvania Volunteer Infantry. Mustered out of Federal Service 7 March 1899 at Augusta, GA.
Mustered into Federal Service 9 July 1916 at Mount Gretna, PA, for service on the Mexican border. Mustered out of Federal Service 27 February 1917 at Chambersburg, PA.
Drafted and mustered into Federal Service 5 August 1917 at Chambersburg, PA, later consolidated with Company C, 16th Infantry (organized 1898) 11 October 1917 and redesignated as Company C, 112th Infantry, an element of the 28th Division.
Mustered out of Federal Service 6 May 1919 at Camp Dix, NJ.
Reorganized 8 March 1921 as Company C, 8th Infantry, at Chambersburg, PA, before being Federally recognized 22 March 1921.
Converted and redesignated 1 June 1921 as Troop E, 104th Cavalry, an element of the 22d Cavalry Division.
Converted and redesignated 23 September 1940 as Battery E, 166th Field Artillery, and relieved from assignment to 22d Cavalry Division.
Inducted into Federal Service 13 January 1941 at Chambersburg, PA, for World War II.
Reorganized 7 March 1943 and redesignated as Battery B, 939th Field Artillery Battalion.
Inactivated 23 October 1945 at Camp Patrick Henry, VA.
Converted and redesignated 24 May 1946 as the 728th Ordnance Maintenance Company, an element of the 28th Infantry Division. Federally recognized 11 December 1946 at Chambersburg, PA.
Ordered into Federal Service 5 September 1950 at Chambersburg, PA, for the Korean War.
Reorganized and redesignated 1 April 1953 as Headquarters and Headquarters Detachment, 728th Ordnance Battalion, an element of the 28th Infantry Division. (Organic elements concurrently constituted and activated.)
Organized and federally recognized 25 January 1954 as the 728th Ordnance Battalion (NGUS) with Headquarters at Lock Haven, PA. Released 15 June 1954 from active Federal Service and reverted to state control and stationed at Lock Haven, PA.
Reorganized and redesignated 1 April 1963 as the 728th Maintenance Battalion, an element of the 28th Infantry Division with Headquarters at Lock Haven, PA.
Converted, reorganized and redesignated 1 March 1992 as the 728th Main Support Battalion, an element of the 28th Infantry Division.

*** CHAMPAGNE-MARNE * AISNE-MARNE * OISE-AISNE * MEUSE-ARGONNE * CHAMPAGNE 1918 * LORRAINE 1918 ***
*** NAPLES-FOGGIA * ROME-ARNO * NORTH APENNINES * RHINELAND * ARDENNES-ALSACE * CENTRAL EUROPE ***

CO. B (CLEARFIELD) ADDITIONALLY AWARDED: * NORMANDY (WITH ARROWHEAD) * NORTHERN FRANCE *

CO. C (PITTSBURGH) ADDITIONALLY AWARDED: * VERA CRUZ * CERRO GORDO * PUEBLA 1847 *

CO. D (PHILADELPHIA) ADDITIONALLY AWARDED: * YPRES-LYS * NORMANDY (WITH ARROWHEAD) * NORTHERN FRANCE *

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