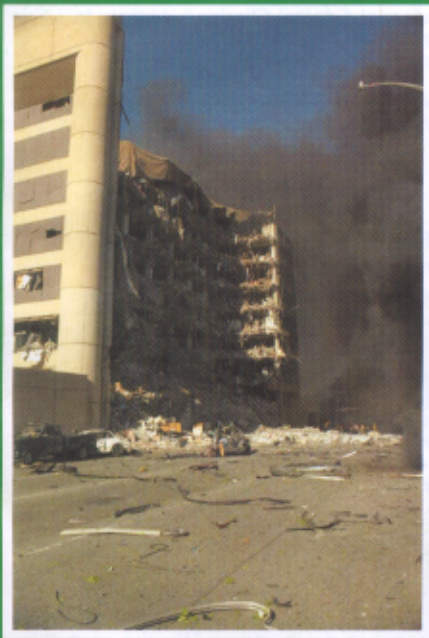


ARMY LOGISTICIAN

JULY-AUGUST 2001



Homeland Security



ARMY LOGISTICIAN

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Disclaimer: Articles express opinions of authors, not the Department of Defense or any of its agencies, and do not change or supersede official Army publications. The masculine pronoun may refer to either gender.

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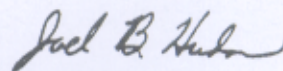
Six years after the worst single act of terrorism on U.S. soil, the bombing of the Murrah Building in Oklahoma City, the Nation's need for continued vigilance against violators of its security is greater than ever. The articles on pages 7 through 26 discuss potential threats to the United States and show how the military and Federal, state, and local agencies are working together to safeguard the Nation's territory, population, and infrastructure against those threats.

This medium is approved for the official dissemination of material designed to keep individuals within the Army knowledgeable of current and emerging developments within their areas of expertise for the purpose of enhancing their professional development.

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0112001

Coming in Future Issues—

- Joint Logistics-Over-the-Shore Exercise
- Field Feeding in the 21st Century
- Optimal CSS Headquarters Command Post
- Medical Maintenance Requirements in Special Forces Groups
- Configuring Airdrop Packages for the IBCT
- Spelling Support With Capital Letters
- Leveraging Contingency Contracting Personnel in PACOM
- Logistics Support Element Planning Model
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- Military Applications of Nuclear Power
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- Convoy Casualty Evacuation
- The Right Force for the Battle: The Theater Support Command

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ALOG NEWS

FEDERAL RESPONSE TO TERRORISM PLAN IDENTIFIES MILITARY SUPPORT ROLE

The Department of Defense (DOD) will play a key role in countering terrorist and other homeland threats under the recently approved United States Government Interagency Domestic Terrorism Concept of Operations Plan (CONPLAN). The CONPLAN provides guidance to Federal, state, and local governments on how Federal agencies will respond to actual or potential terrorist incidents in the United States.

Six agencies with responsibilities under Presidential Decision Directive 39 collaborated in developing the CONPLAN: the Federal Bureau of Investigation (FBI), Federal Emergency Management Agency (FEMA), Department of Energy, Environmental Protection Agency, Department of Health and Human Services, and DOD. The FBI will act as the lead Federal agency (LFA) for crisis management, while FEMA will be the LFA for consequence management.

According to the CONPLAN—

DOD serves as a support agency to the FBI for crisis management functions, including technical operations, and a support agency to FEMA for consequence management . . . DOD will provide assistance to the LFA and/or the CONPLAN primary agencies, as appropriate, during all aspects of a terrorist incident, including both crisis and consequence management. DOD assistance includes threat assessment; DEST [domestic emergency support team] participation and transportation; technical advice; operational support; tactical support; support for civil disturbances; custody, transportation and disposal of a WMD [weapons of mass

destruction] device; and other capabilities including mitigation of the consequences of a release [of a WMD].

DOD agencies such as the Army Medical Research Institute for Infectious Diseases and the Marine Corps Chemical Biological Incident Response Force can provide unique support capabilities in a terrorist incident, particularly if a WMD is involved. DOD assistance requires approval by the Secretary of Defense.

DEFENSE AGENCY STUDIES VULNERABILITY OF SEAPORTS TO ATTACK

The Defense Threat Reduction Agency is assessing the vulnerability of seaports used by the military to chemical and biological attacks. This chemical-biological seaport protection analysis (CB SPPA), which is sponsored by the U.S. Central Command and the U.S. Transportation Command, is being conducted in three parts.

The first part, completed in January, was a concept-of-operations and doctrinal analysis of a generic seaport. This analysis allows local commanders to understand current vulnerabilities and helps them develop a defense plan for the generic port.

The second part of the CB SPPA consists of assessments at several seaports in the continental United States and overseas. Teams of Defense Threat Reduction Agency military and civilian personnel will visit each port to observe port operations, gather data, interview port personnel, and document their observations.

(News continued on page 40)

Note to Our Readers

The Government Printing Office Style Manual recently was updated. The rules in this manual determine the grammar and punctuation style used in *Army Logistician*. The updated version of the manual contains some changes, so you may notice some subtle differences in the appearance of our articles.

—Editor



NEWS

(News continued from page 1)

In the third part of the CB SPPA, the teams will use what they learned from the assessments to develop recommended defense plans for each port. They also will refine the generic seaport defense concept of operations.

Similar seaport assessments have been conducted since 1996 for the U.S. Central Command and the U.S. Pacific Command.

COUNTERTERRORISM SEMINAR SET

The Office of Personnel Management (OPM) is hosting a seminar on "Countering Terrorism" in Shepherdstown, West Virginia, on 30 July through

3 August. This 1-week seminar will examine the threat of terrorism to U.S. security and is directed at those involved in defense, intelligence, security, and law enforcement, including military officers and state or local officials. For more information, call 1-888-676-9632; to register on line, visit the OPM web site at <http://www.leadership.opm.gov/np50.html>.

DIGITIZED FORCE VALIDATED

The Army demonstrated the potential benefits of using advanced information technologies during the Division Capstone Exercise (DCX) at the National Training Center (NTC) at Fort Irwin, California, last April. The 4th Infantry Division (Mechanized) from Fort Hood, Texas, the Army's experimental division for advanced warfighting concepts, conducted the exercise using a distributed tactical Internet to enhance its combat capabilities.

The complex combat environment of the NTC enabled leaders to observe how the digitized equipment holds up and how soldiers can use the digital information

HOMELAND SECURITY INFORMATION ON THE WEB

The Worldwide Web provides many easily accessible sources of news and information on homeland security. Among them are—

Army National Guard
Federal Emergency Management Agency
Rapid Response Information System (RRIS)
International Policy Institute for
Counter-Terrorism
National Defense University Center
for Counter-Proliferation Research
National Security Institute
The Terrorism Research Center
Army Soldier and Biological
Chemical Command Domestic
Preparedness Site
U.S. Pacific Command Antiterrorism Site

<http://www.ngb.dtic.mil>
<http://www.fema.gov>
<http://www.rris.fema.gov>
<http://www.ict.org.il>
<http://www.ndu.edu>
<http://www.nsi.org>
<http://www.terrorism.com/index.shtml>
<http://hld.sbcom.army.mil>
<http://www.pacom.mil/staff/at/athome.htm>

In addition, a web site maintained by ANSER Analytic Services, Inc., at <http://www.homelandsecurity.org> contains current homeland security news, a "Homeland Security Bulletin" that features pertinent new stories each week, and the "Journal of Homeland Security," which provides a medium for policy makers and first responders to discuss homeland security issues. ANSER's "links" page lists over 20 other web sites that contain information on homeland security issues, as well as hotlinks to 15 Federal organizations and offices that have homeland-security-related missions.

that it provides to destroy the enemy. Leaders found that the digital units respond to events with greater agility and precision than nondigital units. Small unit operations were conducted with greater initiative and at a faster tempo, and units were more adaptive to changing situations. Combat formations operating at night and during periods of limited visibility were faster and more lethal than they were before they had the Army Battle Command Systems (ABCS).

The ABCS, commonly referred to as digital information systems, empower soldiers to "move more quickly over the extended battlespace," said Brigadier General James D. Thurman, NTC commander. "The Division Capstone Exercise clearly demonstrated what well-trained and competent leaders can do when they leverage information and use it as an element of combat power."

MTMC REORGANIZATION AIMED AT IMPROVED CUSTOMER SATISFACTION

The Military Traffic Management Command (MTMC) is undergoing a reorganization that will reduce staffing while creating a more efficient and effective organization.

"Restructuring will provide an increased organization focus on customers," said Major General Kenneth L. Privratsky, MTMC commander.

"We are reducing organizational layers, streamlining functions, using best business practices, and effectively leveraging information technology," Privratsky told an audience of 1,600 military, government, and civilian transporters at the annual 2001 MTMC Training Symposium in April.

MTMC's headquarters are located in Alexandria, Virginia. Its Deployment Support Command, which controls ports in the continental United States, Alaska, and Puerto Rico, is located at Fort Eustis, Virginia.

"The most recent changes involve changes to the command's operations structure," said Privratsky. "We have two large operations staffs less than 200 miles apart. We can no longer work that way—instead of headquarters structures in both Alexandria, Virginia, and Fort Eustis, Virginia, the command has plans to reorganize toward a single organization."

By the end of 2001, MTMC will be 15 percent smaller than it was 2 years ago. That strength will be cut an additional 10 percent by mid-2003. Most of the positions to be eliminated are at the Alexandria headquarters.

"In the future," he said, "a single headquarters will

have control over the command's 24 water ports—approximately 2,000 employees . . . It's a big change and it's all aimed at improving our effectiveness in supporting customers." The command's operations center will remain at Fort Eustis.

The reorganization will be phased in slowly, with full completion expected by mid-2003.

ARMY NAMES TOP MAINTAINERS

The Army has named the winners of the 19th Annual Army Awards for Maintenance Excellence (AAME) for fiscal year 2000. The AAME program focuses on maintenance operations in company, battery, and troop-sized units. Five areas in the maintenance program are evaluated: mission accomplishments, readiness, maintenance training, maintenance management, and innovative execution.

"In competing, units not only improve their maintenance and operational readiness, they also reduce waste and improve their efficiency," said Major Richard B. O'Connor, coordinator for the awards program in the Office of the Deputy Chief of Staff for Logistics.

Winners of the 2000 competition are—

Active Army Modification Table of Organization and Equipment (MTOE) Units

Light. Headquarters and Headquarters Company, 7th Signal Brigade, Mannheim, Germany.

Intermediate. 58th Signal Company, Mannheim, Germany.

Heavy. 297th Military Intelligence Battalion, Fort Gordon, Georgia.

Active Army Table of Distribution and Allowances (TDA) Units

Light. Area Maintenance Support Activity 121-G, North Charleston, South Carolina.

Intermediate. 206th Military Intelligence Battalion, Fort Gordon, Georgia.

Heavy. 527th Military Intelligence Battalion, Camp Humphreys, Korea.

Army National Guard MTOE Units

Light. Headquarters and Headquarters Detachment, 540th Quartermaster Battalion, Lenoir, North Carolina.

Intermediate. Headquarters and Headquarters Battery,

113th Field Artillery Brigade, Greensboro, North Carolina.

Heavy. Headquarters and Headquarters Company, 1st Battalion, 133d Infantry, Waterloo, Iowa.

Army Reserve MTOE Units

Light. Headquarters and Headquarters Detachment, 394th Quartermaster Battalion, Aguadilla, Puerto Rico.

Intermediate. 425th Transportation Company, Emporia, Kansas.

Heavy. Headquarters and Headquarters Company, 489th Engineer Battalion, North Little Rock, Arkansas.

RANGER REGIMENT SEEKS QUALIFIED LOGISTICIAN

The 75th Ranger Regiment is seeking a top-quality, highly motivated, branch-qualified captain in Functional

Area 90 to serve as the regimental assistant S4. Applicant must be a male and preferably airborne and ranger qualified. However, airborne and ranger qualifications are not required to apply. Prior service in the regiment or special operations community is not required. The duty station is the regimental headquarters at Fort Benning, Georgia.

As a member of the 75th Ranger Regiment S4, the selectee will have the opportunity for advanced schooling such as Airborne School, Jumpmaster School, Pathfinder, and Ranger School. Furthermore, he will routinely work with other special operations forces and have the latest technology at his disposal. The regimental assistant S4 serves an integral role in the planning and execution of ranger operations in both the conventional and special operations arena, including ranger force modernization, weapons technology, regimental maintenance, transportation, and logistics requirements for missions worldwide.

For more information, call (706) 545-5124 or DSN 835-5830, or send an e-mail to HUDSONJ@SOC.MIL.

MTMC EVALUATES BULGARIAN PORT FOR BALKANS MOVEMENTS

As part of the redeployment of the 101st Airborne Division (Air Assault) from Kosovo to Fort Campbell, Kentucky, in February, Military Traffic Management Command (MTMC) transporters loaded 221 pieces of cargo aboard the Military Sealift Command-chartered vessel *MV Thelisis* at the Bulgarian port of Bourgas. This was MTMC's largest equipment movement on the Black Sea.

The operation was conducted to evaluate the possible use of the port of Bourgas for future equipment movements. MTMC will evaluate the quality of port facilities, Bulgarian military support, and force protection. Having this port available to use in addition to Bremerhaven, Germany, and Thessaloniki, Greece, would add flexibility for moving troops to and from the Balkans.

The port of Bourgas is capable of handling several ships at one time and is near a modern commercial airport. Bulgarian military assistance, including maintenance support, divers, and a navy vessel to provide force protection, reduced the size of the American military presence required. Bulgarian stevedores operated U.S. military equipment and provided quality services that helped make the operation a success.

Bourgas is the second largest port in Bulgaria. The port's proximity to Greece, Macedonia, Serbia, and Turkey and the roads that link the port with major industrial inland points of the Balkans make its possible use appealing when moving units to and from the Balkans.



□ *MV Thelisis* arrives at the port of Bourgas, Bulgaria.

"SMART BOOK" KEEPS COMMANDERS CURRENT ON CSS EQUIPMENT

Information on combat service support (CSS) equipment and systems is available to Army leaders in one centralized publication called the "Commander's Smart Book." This compilation of facts and figures on various products lets commanders know what is available and how to get it.

"[The book] is a good idea because some commanders don't know what's out there," said Steve Nye, equipment specialist for 21st Century Fabric Structures at the Army Soldier Systems Center (Natick). "This helps them to improve the quality of life for soldiers and lets them know we're there to help them."

The Commander's Smart Book is a three-ring binder that contains about 80 pages. It is divided into sections on field services, shelters, nonpowered heaters, powered heaters, generators and power distribution equipment, and military operations in urban terrain products. Most of the product sheets in the book list the national stock number and the name and location of the manufacturer. Phone numbers of the project officers also are included.

As a type of "consumer guide" for brigade commanders, the book lists current items and products now available or that will become available within the next 2 years. Updates are planned for every 6 months. Plans are to offer the book on a CD-ROM also.

To request a copy of the Commander's Smart Book, send an e-mail to steven.nye@natick.army.mil or call DSN 256-5340 or (508) 233-5340.

NATO CODIFICATION SYMPOSIUM SLATED

The ninth International Symposium on NATO [North Atlantic Treaty Organization] Codification will be held 18 to 20 September in Luxembourg. The NATO Codification System (NCS) provides a common logistics language that makes it easier for allies to share equipment and materials. The symposium is held every 5 years. This year it will explore the evolution of the NCS and the challenges facing the system. Participants will have the opportunity to examine codification's place in the transformation of modern logistics and to assess the contribution codification makes to global logistics standards.

Use of the NCS is not limited to NATO members. In addition to the 19 NATO countries using the NCS, 27 other countries either are using the system or have applied to use it. It is used essentially to save money and to aid logistics operations by reducing inventory,

avoiding purchase of unnecessary new parts, accounting for supply costs, lowering purchase prices, aiding cross-service supply, supporting supply sharing between countries, reducing equipment downtime, identifying supply items more quickly, and improving vendor tracking. The NCS is the foundation of interservice and intercountry logistics cooperation, and the need for it will only increase.

Information on the symposium is available on the Internet at http://www.nato.int/structur/AC/135/main/links/e_symposium.htm, by phone at (616) 961-4333, or by e-mail at beddy@dlis.dla.mil.

DLA CONTINUES DEPOT CONTRACTING

The Defense Logistics Agency (DLA) has awarded a contract for operation of Defense Distribution Depot Jacksonville, Florida, to Management Consulting, Inc., of Virginia Beach, Virginia. Jacksonville is the fourth distribution depot to be studied for contracting out.

DLA announced in March 1998 that it would conduct public-private competitions for operation and management of 16 of its distribution depots. In the three studies already completed, Defense Distribution Depot Columbus, Ohio, continued under Government operation, while operation of Defense Distribution Depot Barstow, California, and Defense Distribution Depot Warner Robins, Georgia, was contracted to EG&G Logistics of Manassas, Virginia, in January 2000 and April 2000, respectively.

DLA plans to complete studies of all of the depots by the fall of 2005.

CULINARY EXCELLENCE AWARDS PRESENTED

The 2001 Philip A. Connelly Awards for culinary excellence in dining facilities and field kitchens were presented 3 March in Anaheim, California. Teams from the Army Center of Excellence-Subsistence at Fort Lee, Virginia, and the International Food Service Executives Association from Las Vegas, Nevada, evaluated dining facilities at over 40 installations in 7 countries on food preparation, sanitation, administration, training, and command support training.

Awards were presented in five categories. Winners in each category were—

- *Small Garrison:* 701st (Main) Support Battalion, Kitzingen, Germany.
- *Large Garrison:* 95th Adjutant General Battalion (Reception), Fort Sill, Oklahoma.

- *Active Army Field Kitchen:* 3d Corps Support Command, 277th Transportation Company (HET), Grafenwoher, Germany.

- *Army National Guard:* 712th Maintenance Company (General Support), Windsor Locks, Connecticut.

- *Army Reserve:* Headquarters and Headquarters Company, 143d Transportation Company, 143d Transportation Command, Orlando, Florida.

"KITCHEN IN A CARTON" BEING DEVELOPED

The Army Soldier Systems Center at Natick, Massachusetts, is developing a new meal package that will allow troops at a remote site to receive a hot meal when kitchen facilities are not available. Self-heated meals for remote-site feeding, or the "kitchen in a carton," will contain separate entrée, vegetable, starch, and dessert trays and plates, cups, utensils, and condiments for 12 to 18 soldiers.

A rectangular box will contain the self-heated meal. Chemicals that are activated by water will heat each food tray. Two versions of this heating system are being de-

veloped. In one, a tab sticking out of the top of the box is pulled to release water into the chemicals to activate the heater. Another version uses a collapsible water bottle inserted into a nozzle at the top of the carton to fill the heating trays. The plates, cups, utensils, condiments, and complementary foods, such as hamburger buns, are stored in compartments on each side of the carton.

The Army plans to demonstrate this meal concept at Fort Irwin, California, and Fort Polk, Louisiana, in 2002. Following a successful concept demonstration, the project will be transitioned to advanced development to meet specific military performance requirements.

WEB SITE PROVIDES COURSE INFORMATION

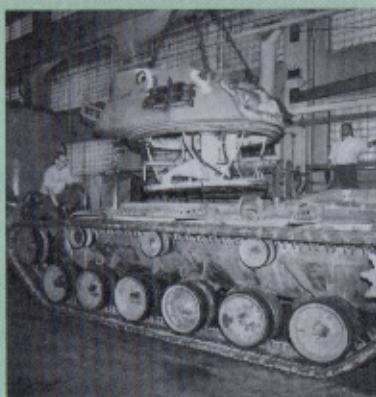
Information on training courses conducted by the Active Army, Army National Guard, and Army Reserve is now available on the Worldwide Web. The Army Training Requirements and Resources System (ATRRS) web site, <http://www.atrrs.army.mil>, provides course dates, length, and prerequisites and additional data such as bil-

M60A3 TANKS MASQUERADE AS RUSSIAN VEHICLES

Rock Island Arsenal, Illinois, is converting 10 M60A3 tanks to simulate Russian BMP-3 infantry combat vehicles. The modified vehicle, called BMP-surrogate (BMP-S), can be operated manned or unmanned, depending on training requirements.

The extremely high cost associated with acquiring actual threat hardware triggered the initiative to convert M60A3s to BPM-Ss. Each BMP-S the arsenal is building will consist of an M60 hull and drive train with a BMP-3 façade placed on it. Various ductwork and wiring are being added to produce the same thermal imaging as a BMP-3. All installed weapons and hardware will be nonoperational.

The BMP-S gives soldiers an excellent image to locate and track through visual, millimeter wave, or thermal imagery sensors. It will be used as a target in training designed to teach U.S. troops to locate and identify various types of tactical vehicles.



□ Above, a 15,000-pound turret is being removed from an M60A3 tank hull and will be replaced with the surrogate body.

□ Below, workers measure the BMP-S before mounting a spotlight. Note that the physical profile of the BMP is lower than that of the M60A3.



Once a soldier determines the availability of a course, he still must go through his chain of command to register. The advantage to locating a course on the ATRRS web site is that the soldier has access to information on all courses offered, increasing the chances of locating a course with space available at a time when he can attend.

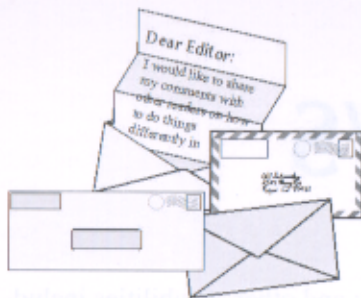
For more information, call the MTMC third-party logistics program coordinator at (703) 428-2295.

Within 90 days, Eagle Global Logistics will begin

The Council of Logistics Management (CLM) will hold its annual conference in Kansas City, Missouri, 30 September to 3 October. This year's conference will focus on "Collaborative Relationships in a Changing Economy." Attendees will learn how to forge relationships with supply chain partners in a fast-paced, technology-driven arena. For more information and to register on line, visit the CLM web site at <http://www.clm1.org>.

✂ ————— ✂

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LOG NOTES

MTOE Woes

I am concerned about the continuing and repetitive changes to modification tables of organization and equipment (MTOEs) and the impact those changes are having on unit operations.

I am a chief supply sergeant who maintains CBS-X, asset visibility, and other supply data for subordinate units in the command. Although our MTOE changes are forecasted for 2 years out, the units must implement new MTOEs on an annual basis. This results in unit supply sergeants retrieving and preparing items of equipment for turn-in or lateral transfer, only to find they have to order the same items for receiving 365 days out, depending on the force activity designator (FAD) and urgency of need designator (UND). [A FAD identifies and categorizes a force or activity on the basis of its military importance. Ranking from high to low is expressed as I to V.] This command has FAD units ranging from II to V. As you can imagine, these changes in equipment requirements create a major workload for the unit. It is particularly frustrating when an equipment requirement is deleted one year and then, 2 years later, the same item, or a substitution, is restored to the MTOE.

Ten years ago when I was a unit supply sergeant, a unit maintained the same MTOE for a longer period of time. Today, however, I'm having to instruct my supply sergeants to move equipment each year, which also affects a commander's unit status reporting (although that is another whole story).

A lot of effort goes into reviewing a new MTOE received from the Department of the Army and working the unit characteristics to match the new MTOE. I would like to know what is going on. Are annual MTOE changes a part of the Army's transformation process? Why are we deleting an item one year and adding it back to the MTOE 2 years later? It is not easy to train soldiers to

use equipment when it comes and goes so quickly.

It is a logistical nightmare out here, and it just doesn't make sense to us soldiers in the trenches.

MSG Antonio P. Colon, FLARNG
Tallahassee, Florida

Need for Recovery Vehicles

I wasn't surprised to hear that a recovery vehicle variant of the LAV would not be produced. The M88A2 took 15 years from the time the M1 was inducted into the Army to make its debut. I am presently serving in Kosovo with the 1st Armored Division. I have had to use the M998 and M1026 as my primary recovery assets due to the limited width, weight capacity, and conditions of the roads. The Norwegians who serve in our sector have a similar vehicle to the LAV3 and have been able to go just about anywhere with it. Unfortunately, the M984A1 cannot go where the Norwegians go because of its length and turning radius. I understand that each LAV will have its own winch, but so does every M1114. My section frequently pulls M1114's out of ditches, off their tops, and out of the ravines we find them in. I'm wondering how long it will take the Army to throw another recovery vehicle together because the need arose for it, and will it be a dud because it was thrown together in a hurry and not given the same testing as the other LAVs? I'm afraid I will spend more time working on my vehicle instead of working on the vehicles assigned to my care.

I know I sound cynical, but as an M88A1 driver, and now recovery section supervisor, I have seen the Army's concern for recovery assets. It usually shows itself at 0300 when someone is stuck or broke down. The MTOE for an infantry battalion has each maintenance team chief riding in an M113.

Why not add a useful boom and a winch with more capacity than the normal LAV? The team chief could fix more on site and would have to defer less to the unit maintenance control point. That's multiplying your combat strength with every vehicle you keep in the fight.

I understand there are many officers in the Army who are assigned to strategize the battles of the future. I just wonder if the battles to come have a footnote stating "for paved roads only," because that's what we're preparing for.

SSG John Novotny
Kosovo

Benefits of the Stock Fund

I have some comments regarding the letter from Thomas R. Welch in the March-April 2001 issue.

Prior to April 1992, not all repair parts were free issue. Only those items considered as procurement appropriation, Army-secondary items (PAA-2) were free issue to consumers. Those items were funded at the wholesale level.

As of 1 October 1990, all previously PAA-2 funded items, which include depot-level reparables (DLRs), field-level reparables (FLRs), consumables, and other items, were aligned to the stock fund. When implementation of the stock fund was completed, Army items were accounted for at the wholesale level in three ways: as major items (including ammunition), consumable stock funded items, and reparable stock funded items.

The plan to stock fund the items previously funded by PAA-2 requires an understanding of the way the funding structure changed. The PAA-2 accounts were established to procure DLRs, and the stock fund account was chartered to procure FLRs and consumables. Under the stock fund depot level reparables (SFDLR) plan, all secondary items were realigned into two categories, reparables and consumables, both under the stock

fund account.

The main purpose of the Army's SFDLR program was to enable the Army to meet the requirements of Defense Management Report Decision 904C within established timeframes and constraints. This was to be accomplished in three initiatives. The first initiative of the SFDLR program was to improve discipline, management, and visibility of DLR items. The second initiative of the SFDLR program was to obtain the benefits of a single funding source for procurement and wholesale maintenance of all secondary items. And the third initiative of the SFDLR program was to make it easier to link costs to weapons systems.

Mr. Welch states that it was a drawback for direct support and general support maintenance activities to repair items rather than sending them back to a depot for repair. That was one of the purposes for doing away with the "free issue" repairable. When it was considered as "free issue" by the commander, he had no real incentive to repair an item. Under the SFDLR program, it was more cost effective to repair than buy a new or rebuilt item from the wholesale system. Those items that were on the depot repair list were automatically returned for repair (automatic return items). Also, within SARSS-O, programs and procedures are in place to ensure that repairable items are returned to the supply system for repair. It is up to logisticians at all levels to include commanders to ensure that the system works.

I started in the Army supply system in the days of stubby pencils (1956); today, in the position I am in now, I welcome all the changes brought about by SFDLR, SARSS-O, GCSS-Army, and SSF. They are much-needed improvements for the Army and the soldier in the future. We can make it work.

Jerry L. Brooks
Fort Eustis, Virginia

More on Property Accountability

The unsigned letter titled "I Don't Understand Either" certainly hit home. Having been involved with processing reports of survey for many years, I am

thoroughly disgusted. The process is a sham. The author is right in that, statistically, higher graded enlisted and officers are seldom found liable while junior enlisted are. The reason is simple: Rank has its privileges.

The writer's comment about not understanding why soldiers will not take responsibility for their actions and sign a statement of charges is probably untrue. It seldom occurs, but does the author in fact know why? No one wants to lose any money, and senior people know they can argue the issue and usually get it dropped by the commander or sympathetic lawyers (advisors to the commander). Unless you are junior grade; then, apparently, you need to be taught a lesson.

Here in my unit, we seldom recoup enough funding to cover the wages of the program manager, let alone the cost of the advisors and the commander reviewing each action. The letter writer is right in that commanders would take more interest if the recovered monies could be returned to the unit, but since they would just go back to the Treasury, there is no incentive.

We would become more efficient by eliminating the report of survey program. It doesn't work anyway.

Jeffrey Holmes
Fort Sam Houston, Texas

I, too, identify with the individual who wrote the article, "I Don't Understand Either," in the March-April 2001 issue. However, let's be clear on what the regulation says. Formal property book records will be maintained for property with a unit cost of \$300 or more and expendable property authorized by tables of organization and equipment (TOEs), modification tables of organization and equipment (MTOEs), and tables of distribution and allowances (TDAs) including augmentation and deployable, common tables of allowances (CTAs) deployable property, and/or special authority as organizational property. I can go on and list the Federal Supply Classes (FSCs) that require property accountability based on dollar amount; however, commanders and property book officers may designate items as pilferable or otherwise require property book accounting for items they feel need to go back on the books. Com-

manders are still required to maintain hand receipts down to user level for equipment no longer required to be on the property book. The commander must understand that he still is responsible for Government property used by him and his military and civilian personnel.

What I consider a bigger problem is the property that is turned over to private contractors for use during the period of a contract. There are more activities contracting out these days, but there is no standard property accountability system for the Government property used by contractors. I believe that, within a year after turning the equipment over to the contractor, Defense activities no longer have a clear view of what the contractors have on hand. Thus, there is a possibility of losing hundreds of thousands of dollars in equipment.

I believe all Department of Defense (DOD) contractors should immediately be put on the Defense Property Accountability System (DPAS). Let's use a standard system for all contractors. Already I can hear the contracting folks saying, "the FAR [Federal Acquisition Regulation] says this" and "the FAR says that." Folks: the bottom line is, we need to be accountable. We need to have visibility of the property that is in the hands of contractors. We need to ensure that contractors record and report property, plant, and equipment (PP&E) information on the DOD property in their possession. Another advantage of putting contractors on DPAS is that they will be able to report to the Chief Financial Officer (CFO). The answer is DPAS.

Charles E. Willyard, Jr.
Fort Irwin, California

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Building a Synchronized 026 Report

by Captain Brandon Grubbs and Captain Peter J. Ramirez

Synchronizing the transfer of ULLS data through the supply and maintenance systems is critical to providing the commander with accurate information.

The brigade must attack in 36 hours. The brigade executive officer has just returned from the brigade maintenance meeting, where an AHO-026, Equipment Deadlined over XX Days by Battalion Report, was used to update him on inoperable equipment, the identity and status of the parts needed to repair the equipment, and the projected combat power for the fight. He is confident that needed maintenance will be completed when promised, not only because of the brigade's capabilities, but also because the materiel management center above the brigade has been trying to fill the brigade's parts requirements since they were received on the SAMS-2 system. With a clear and accurate picture of combat power, the brigade staff can continue its military decision-making process, knowing the current maintenance status and the projected combat power of each task force.

A brigade commander must have a clear picture of his combat power to make effective decisions. The information on which he bases his decisions must be accurate and timely. Much of this information is gained from the 026 report generated by the Standard Army Maintenance System (battalion level) (SAMS-2).

The cornerstone of producing an accurate 026 report is synchronizing the transfer of information from the Unit Level Logistics System-Ground (ULLS-G) through the Standard Army Retail Supply System (SARSS) and SAMS. The status of the parts requisitioned through SARSS must be included in the information sent to SAMS-1 at the company level for SAMS-2 to generate an 026 that will provide the information the commander needs. Thus, the ULLS clerk must submit requisitions to SARSS and receive the status of the requisitions be-

fore entering the data into SAMS.

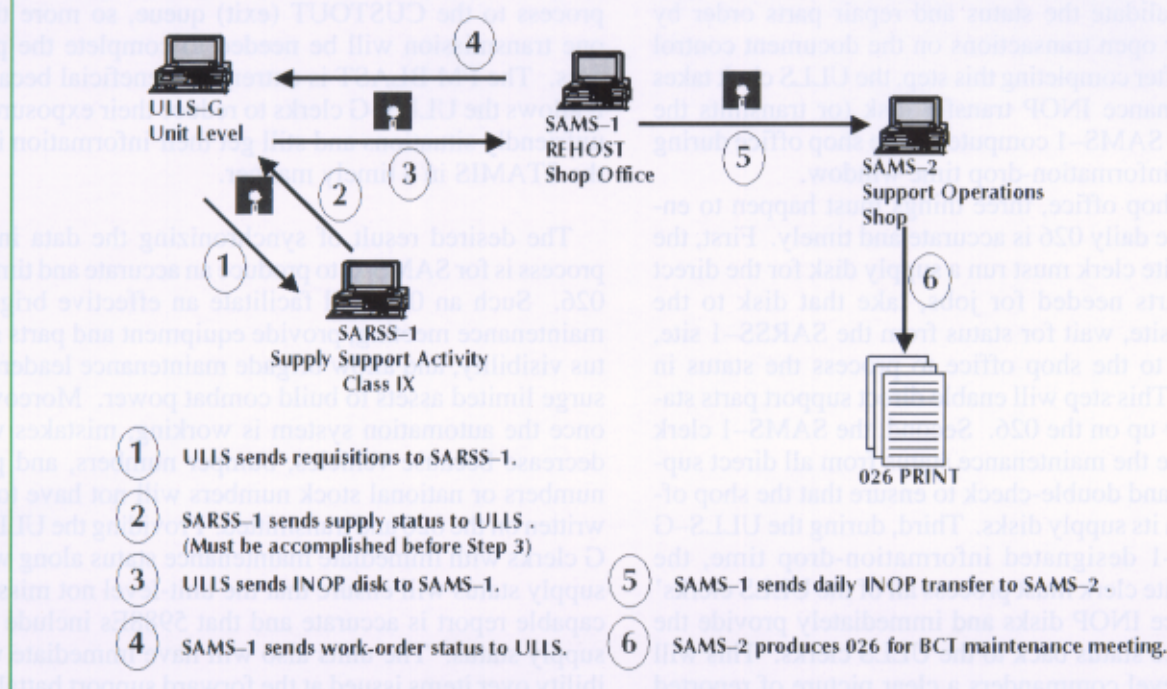
Keep in mind that not only will brigade maintenance leaders have visibility of supply request status, but also the division, regimental, and corps materiel management centers will be able to help the brigade maintenance effort because they receive accurate SAMS-2 data transmissions. Giving these commodity managers an accurate picture will give more focus to the brigade maintenance fight.

The 026 report must have the latest information before the daily brigade maintenance meeting because an accurate and timely 026 report is the focal point of the meeting. From this document, brigade leaders are able to determine maintenance and class IX (repair parts) support priorities. Synchronizing the input of data from ULLS-G to SARSS and SAMS further validates that critical class IX requirements are in the supply system and enables the brigade to focus the limited transportation assets available on expediting delivery of critical repair parts when and where they are needed. Although the 026 produced for the brigade maintenance meeting is the focal point for generating combat power for the impending battle or daily missions, units must understand that updating the 026 is a continuous process.

The keys to an accurate and timely 026 are—

- Command emphasis.
- A good synchronization plan that incorporates all units of the brigade combat team (BCT).
- Well-trained ULLS-G clerks who are aware of the plan and their part in its execution.
- Well-organized SARSS-1 and SAMS-1 sites that incorporate redundant systems, such as power generation and radio communications, to support the BCT.
- Pre-combat inspections and pre-combat checks and rehearsals that are completed before the brigade departs from the motor pool for deployment.

How to Synchronize an 026



Developing a Synchronization Plan

The forward support battalion support operations officer (SPO) must devise the information transfer synchronization plan (either by disk or electronic transmission), coordinate with brigade leaders and the signal officer, and activate the plan. The plan must take into account—

- Times.
- Distances.
- Sustainment training level of the supported units.
- Blocked asynchronous transmission (BLAST) windows.
- Battle rhythm.
- Environment (mission, enemy, terrain, troops, and time available).
- BCT maintenance meeting times.

The SPO must publish the information drop (either by disk or electronic transmission) times and confirm that the ULLS clerks received and understood the schedule. The SPO must have a system to track the supply and maintenance information drops so he can report their status at the BCT maintenance meeting.

The results of the information drop data can tell the support operations section and brigade maintenance leaders several things. First, it can confirm that the information on the 026 is current. Second, it can alert the SPO if there are automation or signal problems. Third, it can

indicate if the units understand and are executing the synchronization plan. Finally, it can be an indicator for the brigade commander of how well his maintenance systems are working.

Executing the Plan

A well-trained ULLS-G clerk is the most critical link in executing the synchronization plan. The ULLS-G clerk must complete two essential processes in sequence to facilitate a synchronized information drop.

First, after receiving all the 5988Es (electronic version of the Equipment Inspection and Maintenance Worksheet) and other pertinent information from the company or task force, the ULLS clerk must update all information in ULLS-G and run a SARSS-1 supply disk transaction output. The ULLS clerk and battalion maintenance officer must verify the information and ensure that an updated FEDLOG (Federal Logistics Data on Compact Disk) is on hand. The ULLS clerk delivers the information to SARSS-1 at the supply support activity (SSA) class IX warehouse within the published disk-drop window. The SSA must input the data immediately to SARSS-1, process the requests, and provide supply status back to the ULLS clerk.

Second, the ULLS clerk must download the supply information from SARSS-1 into ULLS-G before he runs the maintenance inoperable equipment (INOP) informa-

tion. It is critical to execute this step before running the maintenance INOP data; this is the source of the supply status information on the 026 report. The ULLS-G clerk then can validate the status and repair parts order by looking for open transactions on the document control register. After completing this step, the ULLS clerk takes the maintenance INOP transfer disk (or transmits the data) to the SAMS-1 computer at the shop office during the proper information-drop time window.

At the shop office, three things must happen to ensure that the daily 026 is accurate and timely. First, the SAMS-1 site clerk must run a supply disk for the direct support parts needed for jobs, take that disk to the SARSS-1 site, wait for status from the SARSS-1 site, and return to the shop office to process the status in SAMS-1. This step will enable direct support parts status to show up on the 026. Second, the SAMS-1 clerk must update the maintenance status from all direct support shops and double-check to ensure that the shop office has run its supply disks. Third, during the ULLS-G to SAMS-1 designated information-drop time, the SAMS-1 site clerk must process all of the ULLS clerks' maintenance INOP disks and immediately provide the maintenance status back to the ULLS clerks. This will give unit-level commanders a clear picture of reported maintenance. Then the shop office can run a SAMS-1 INOP transfer disk to the SAMS-2 system at the support operations office so that all not mission capable equipment, supply requests, and the status of the requests appear on the 026 generated by SAMS-2.

Transferring Data

Methods of getting information from the unit maintenance collection point to the brigade support area (BSA) include "sneaker net" (hand-carried disks), frequency modulated (FM) BLAST electronic data transfer, and the mobile-subscriber-radio transmitter. Each technique has both positive and negative aspects.

If a unit's ULLS-G system is on a laptop computer, one "sneaker net" technique is for two ULLS clerks to take the ULLS-G laptop with them to the SSA and then to the shop office. This method will reduce the time and distance factors by eliminating the need for the ULLS clerk to return to the unit from the SSA to input the requisition status to the ULLS computer before taking the data to the shop office. It also will cut the length of time that the ULLS clerks are exposed to the enemy in an unsecured area. In addition, if the clerks are having problems with their laptops or the program, they can get help from the Combat Service Support Automation Management Office or inform the SPO of their Standard Army Maintenance Information Systems (STAMIS) difficulties. They also can check for parts while they are at the SSA.

If a unit is using an FM BLAST technique, the SPO

needs to know that the SSA will process the requisitions before it provides the supported unit with the status of those requisitions. SARSS-1 needs several minutes to process to the CUSTOUT (exit) queue, so more than one transmission will be needed to complete the process. The FM BLAST is extremely beneficial because it allows the ULLS-G clerks to reduce their exposure to unfriendly situations and still get their information into the STAMIS in a timely manner.

The desired result of synchronizing the data input process is for SAMS-2 to produce an accurate and timely 026. Such an 026 will facilitate an effective brigade maintenance meeting, provide equipment and parts status visibility, and allow brigade maintenance leaders to surge limited assets to build combat power. Moreover, once the automation system is working, mistakes will decrease because vehicles, bumper numbers, and part numbers or national stock numbers will not have to be written on the 026 and transmitted. Providing the ULLS-G clerks with immediate maintenance status along with supply status will ensure that the unit-level not mission capable report is accurate and that 5988Es include the supply status. The units also will have immediate visibility over items issued at the forward support battalion SSA or requests that faulted out of the system. ULLS-G, SARSS-1, SAMS-1, and SAMS-2 will be used confidently as the management tools they are designed to be, because they will have relevant, accurate, and timely information.

Because the brigade used a synchronized STAMIS information transfer plan and had a clear maintenance picture, it was easy for the commander and his staff to choose the lead task force and continue with their military decision-making process. They did not waste valuable planning time worrying about the maintenance status of the task forces.

ALOG

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Captain Peter J. Ramirez is a small group leader with the Combined Logistics Captains Career Course at the Army Logistics Management College, Fort Lee, Virginia. He previously was the forward support battalion maintenance company observer-controller at the National Training Center. He has a B.S. degree in management from Park College in Missouri and is a graduate of the Ordnance Officer Basic Course, the Combined Logistics Officers Advanced Course, and the Support Operations Course.

TRADOC's Role in Refining Homeland Security Requirements

by Larry Heystek

The author tells how the Army Training and Doctrine Command is helping define homeland security for the Army and the Nation.

Homeland security is in the news more and more often these days. It is a topic that is addressed in numerous civilian and military studies, mentioned by various officials in both the administration and Congress, and of growing importance to military leaders. The question, "What is homeland security?" cannot be answered fully. It is an idea that crosses numerous disciplines and has many interpretations. However, for the Army, an answer to that question is beginning to take shape.

For the past few years, numerous Army agencies have explored homeland security. From this long and sometimes contentious effort, Headquarters, Department of the Army (HQDA), has produced a vision for, and definition of, homeland security and has identified mission areas to guide its efforts.

The Army's Responsibility

HQDA began developing Army Homeland Security Strategic Planning Guidance in the fall of 2000. Currently in draft form, this document has been staffed throughout the major Army commands and reviewed by a general officer steering committee. The draft guidance is a product of a series of Army-sponsored workshops. It incorporates other activities' studies and ideas and places all of the information within the framework of laws, directives, and regulations that govern the Army. This document is designed to begin the conceptual process of defining homeland security and develop a common Army position and terms of reference on homeland security.

The draft guidance outlines the Army's responsibility to conduct defensive operations as part of the Department of Defense's (DOD's) commitment to defend the United States from external attack by land, sea, or air

and to conduct support operations for civil authorities in widely varied circumstances (see chart on page 8). These two types of operations are discussed in draft Field Manual (FM) 3-0, Operations (formerly FM 100-5).

The draft guidance does not establish doctrine, nor does it address force structure or requirements to man, equip, or employ the Army. It explores the two overarching principles of the Army's participation in homeland security. First, the Army will be a supporting organization working for civil authorities in most missions. Second, the Army will be a supporting component of the commander in chief in a joint operation.

Goals and Objectives

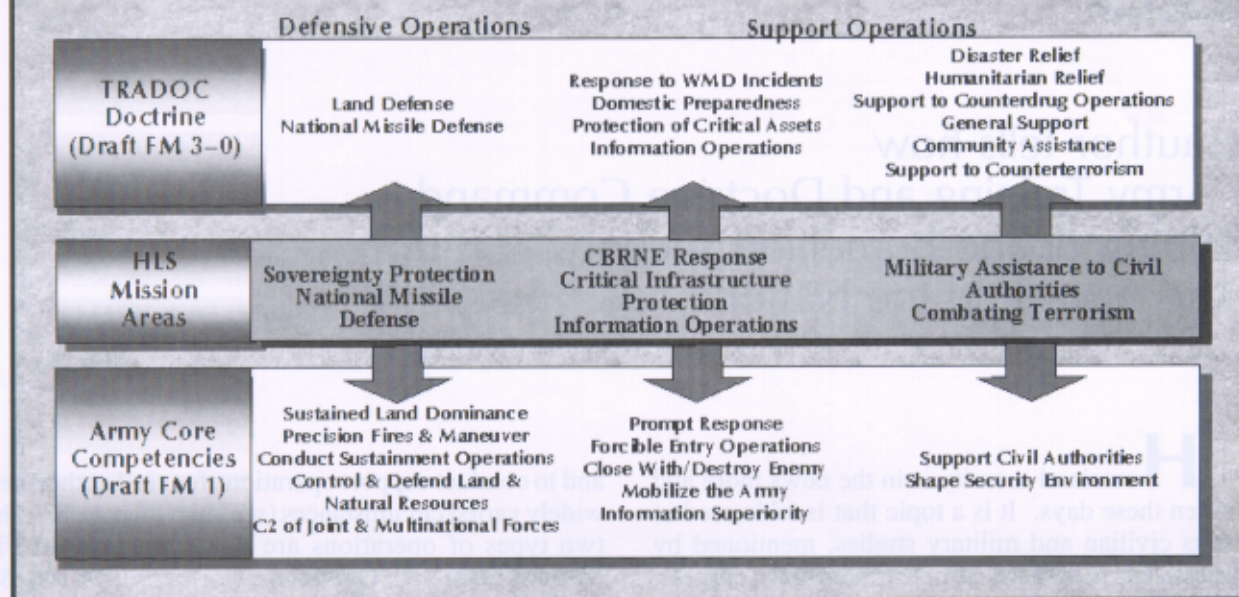
The draft Army Homeland Security Strategic Planning Guidance sets numerous goals, objectives, and tasks. Although the Office of the Deputy Chief of Staff for Operations and Plans, HQDA, has the primary responsibility for coordinating the Army's actions in homeland security, the Army Training and Doctrine Command (TRADOC), along with other commands and agencies, will assist its efforts. TRADOC will—

- Study the creation of a homeland security integration center at the Maneuver Support Center (MANSCEN) at Fort Leonard Wood, Missouri. It would serve as the Army's centralized manager for coordinating and synchronizing the doctrine, training, leader development, organization, materiel, and soldier (DTLOMS) process. Also, MANSCEN would conduct experimentation, combat developments, and modeling and simulations for the Army's homeland security effort.

- Develop and implement a comprehensive exercise and simulation program to validate assumptions, verify



Army Competencies and Doctrine "Coverdown"



capabilities, identify resource requirements, and determine solutions for homeland security capabilities and requirements to support the Army's Transformation Campaign Plan.

- Develop an integrating homeland security concept and coordinate policy for including DTLOMS and homeland security capabilities in the Objective Force.
- Examine other nations' homeland security actions to determine the best practices.
- Develop measures of effectiveness based on specific assignments to assess homeland security readiness.
- Assist in reviewing the availability and suitability of equipment supporting the chemical, biological, radiological, nuclear, and high-yield explosive (CBRNE) response mission. Also, TRADOC will develop requirements for specialized units and equipment for CBRNE and information operations.

Future Developments

For TRADOC, the DTLOMS process is the basis for approaching homeland security. Much of what the Army will have to accomplish to provide homeland security will be a modification of a wartime task. However, some totally new developments also will be required.

Doctrine. Doctrine defines fundamental principles that guide military actions in support of national objec-

tives. Doctrine is not written on the spur of the moment, but only after the progressive analysis of an idea, followed by the development of a vision, then the production of a concept; that concept then is explored through experimentation, which leads to a doctrinal document. Currently, homeland security is an emerging idea with some vision attached to it. Although it is viewed as something new, most of it is not. When dissected into its component parts, many aspects of homeland security, such as domestic support operations, information operations, counterterrorism, and offensive and defensive operations, are covered in existing doctrine.

Training. Often, individual and collective tasks remain the same as a unit accomplishes its mission in a homeland security environment. However, in a domestic setting, certain civil regulations may dictate different standards of acceptable equipment and procedures. Training requirements for operations within the United States, especially when they include interaction with civilians in a public setting, must be considered. This is especially true in a CBRNE event where domestic Federal regulatory agencies, such as the Occupational Safety and Health Administration, apply civil standards to military operations that involve hazardous materials. To comply with these standards, certain units will require specialized individual and collective training. MANSCEN

also will continue to provide expert training to new units such as the Weapons of Mass Destruction-Civil Support Teams (WMD-CSTs). [See article on page 21.]

Leader development. Although units on homeland security missions will execute their operations within an existing military command and control structure, they generally will be working for a civilian agency. This will require an increased awareness of what is needed to operate successfully in a joint, interagency, and multijurisdictional context. Army leaders must understand the civilian homeland security process and how their units will operate within the civil sphere.

Laws and regulations that are not used in foreign environments govern domestic operations. This is especially true when providing support to civil law-enforcement operations. These parameters must be clearly defined, and training at the institutional and unit levels must ensure that leaders fully understand them.

Organization. New organizations such as the WMD-CSTs have been activated to support homeland security in the CBRNE response mission area. The WMD-CSTs are authorized in many state Army National Guard structures to assist civil authorities in CBRNE incidents. Other organizations, such as chemical reconnaissance-decontamination units, have had their missions expanded to include domestic CBRNE support. This has required the units to train on how to operate civilian equipment and the inclusion of proper handling of CBRNE materials among the units' functions. Existing active Army chemical and biological units have been organized into chemical-biological rapid response teams that can be deployed in response to a CBRNE event.

As homeland security responsibilities are recognized and authorized, other new units may be created. The largest of these probably will be the Army's segment of the national missile defense organization.

Materiel. Much of the Army's equipment is compatible with that required to support civil authorities in the aftermath of a disaster or attack. The Army has a great deal of experience in such support. However, materiel will have to be developed to support national missile defense. As the Army develops new equipment, it may be possible to incorporate features that will allow it to be adapted to a civilian environment.

To posture itself for national missile defense, the Army should take advantage of the rapid growth of civilian technology. Often this equipment can be used domestically in its off-the-shelf configuration without the modification or hardening that may be required for combat use.

Soldiers. The Army Values—loyalty, duty, respect, selfless service, honor, integrity, and personal courage—

apply to a soldier's actions in a domestic role as easily as they do on a battlefield. The strength of the Army has been, and will continue to be, its soldiers, civilians, and families. The Army's support to homeland security will be as professional as when it is called upon to fight in a foreign land.

Homeland security is not a new requirement for the Army. Since its inception, the Army's primary purpose has been to protect the Nation's citizens, their property, and their way of life. This message may have been lost in the latter part of the last century, when the Army emphasized forward presence and overseas operations, but to the people of Hawaii, Alaska, the Philippines, Guam, and other parts of the U.S. sovereign homeland that were bombed and occupied in the 1940s, the need for homeland security was a real thing.

As the Nation rediscovers this issue, it should not go unnoticed that the Army already does much of what will be required to ensure homeland security. It is a matter of framing the context of the Army's missions and supporting role and applying its capabilities to the task. When new requirements emerge, the Army must show its flexibility and adjust to the needs.

The Army needs a clear vision of homeland security requirements from the elected leadership in the executive and legislative branches of the Federal Government. This must be followed by equally clear guidance from DOD leadership, both in and out of uniform. Then the Army can position its assets to accomplish the mission. Until this happens, the Army must prepare to assist the Nation as the requirements evolve. In the meantime, the tendency to create new phrases and terms where those that already exist are clear should be avoided. The Army must leverage its great skills and soldiers to the continued benefit of the Nation. **ALOG**

Larry Heystek is a contractor with the AB Technologies Group, Illinois Institute of Technology Research. For the past 2½ years, he has worked on TRADOC's role in homeland security at the Joint and Army Doctrine Directorate of the Office of the Deputy Chief of Staff for Doctrine, Headquarters, Army Training and Doctrine Command, Fort Monroe, Virginia. He is a retired Infantry officer. While on active duty, he held numerous command and staff positions in the United States, Europe, and the Middle East.

Training the Nation to Respond

A terrorist attack quickly could wreak havoc with community or state emergency resources. The Army Soldier and Biological Chemical Command has been instrumental in teaching the Nation how to bring order to the chaos.

Disasters such as the Oklahoma City and World Trade Center bombings caused Americans to realize that terrorist attacks no longer are limited to countries on the other side of the globe. Americans also have become aware that terrorist attacks are not always delivered by conventional means. The threat of chemical or biological terrorism is now a real concern. How will we respond if this threat becomes a reality?

In an effort to equip the Nation to guard against and respond to domestic terrorism, Congress passed the Defense Against Weapons of Mass Destruction Act of 1996 (commonly called the Nunn-Lugar-Domenici bill). This bill provided funding for the Department of Defense (DOD) to augment the capabilities of Federal, state, and local agencies to respond to incidents involving nuclear, biological, and chemical (NBC) terrorism.

The Army Soldier and Biological Chemical Command (SBCCOM) at Aberdeen Proving Ground, Maryland, is the center of much of DOD's chemical and biological expertise. As such, it has developed a comprehensive homeland defense program to assist DOD and other Federal, state, and local emergency responders. Several initiatives comprise the program.

Domestic Preparedness Program

SBCCOM's Domestic Preparedness Program originally included six "train-the-trainer" courses that were designed to educate city emergency personnel: Emergency Responder Awareness, Emergency Responder Operations, Technician-HAZMAT [hazardous materials], Technician-Emergency Medical Services, Hospital Provider, and Incident Command. SBCCOM also offered a Basic Awareness Course for those working in

or near a potential target area and a Senior Officials Workshop for city leaders.

These courses were coordinated with city officials by an interagency team comprising representatives of the Federal Bureau of Investigation, the Federal Emergency Management Agency, the Department of Energy, the Environmental Protection Agency, the Department of Health and Human Services, and DOD. Team members explained their role and capabilities to cities desiring training. The city officials then scheduled the courses they felt were best suited to their communities. To reinforce the training and allow the cities to evaluate and enhance their response plans, the teams often conducted chemical tabletop exercises immediately following the training courses and biological tabletop and chemical functional exercises after 6 months or so had passed. These exercises enabled the communities to train their response personnel, update their plans with the information gained during the training, and test their plans.

The ultimate goal of the Domestic Preparedness Program is to train instructors in 120 cities across the nation. In October 2000, after more than 28,500 potential instructors in 105 cities were trained and biological tabletop and chemical functional exercises were conducted in 68 of those cities, responsibility for this program was transferred to the Department of Justice.

Biological Weapons Improved Response Program

To help communities identify ways to improve their response to biological weapons (BW) incidents, a Biological Weapons Improved Response Program team, led by SBCCOM, developed a BW response template. This template portrays the concepts and specific activities that



□ Members of a weapons of mass destruction civil support team wear protective equipment while training at Fort Leonard Wood.

a community should consider when evaluating its own emergency preparedness plans. It can be used to prepare plans for responding to BW incidents or to major disease outbreaks that occur naturally.

The template is included in the "1998 Summary Report on BW Response Template and Response Improvements, Volumes 1 and 2." This report also contains proposed timelines and projected personnel and resources needed for each response activity. A brief form of the template can be found in an SBCCOM-prepared interim planning guide entitled "Improving Local and State Agency Response to Terrorist Incidents Involving Biological Weapons," which is available on line at <http://www2.sbccom.army.mil/hld>.

Chemical Weapons Improved Response Program

The Chemical Weapons (CW) Improved Response Program is a long-term approach to high-priority needs of responders at the scene of a chemical weapons deployment. The program involves operational and scientific research conducted through workshops, scientific

investigations, and functional exercises that develop, test, and validate CW incident response procedures. Representatives of local, state, and Federal government agencies; law enforcement officers; firefighters; emergency medical technicians; emergency management professionals; and members of the Army National Guard and Army Reserve participate in this program.

To complement the CW Improved Response Program, SBCCOM published "Guidelines for Mass Casualty Decontamination During a Terrorist Chemical Agent Incident." This publication can be obtained from the SBCCOM web site at <http://www2.sbccom.army.mil/hld>.

Military Improved Response Program

The responsibility for the civilian BW and CW Improved Response Programs was transferred to the Department of Justice on 1 October 2000. However, DOD retained responsibility for the Military Improved Response Program and now is focused on improving the capabilities of military responders and response units.

SBCCOM and the Department of Justice will coordinate their respective improved response program efforts. Mutual aid by military and civilian responders is key to successful response to an incident involving weapons of mass destruction (WMD).

WMD Installation Preparedness Program

While implementing the Domestic Preparedness Program, SBCCOM recognized a need for similar training at military bases and facilities. The WMD Installation Preparedness (IP) Program was developed to meet this need.

The IP Program outlines a comprehensive process for preparing U.S. military installations to respond to asymmetric attacks involving NBC warfare agents, mitigate the impact of the attacks on operations, and restore vital mission capabilities. The process consists of eight separate components: command and staff workshops, baseline assessments, training, planning workshops, technical assistance, chemical and biological weapons tabletop exercises, and chemical weapons field exercises. The program is conducted by mobile teams that go to the installation, thus promoting synergy and interoperability among the military and civilian responders on the installation, as well as with mutual aid counterparts in the local, state, Federal, and host nation communities. The program can be delivered in its entirety or in modules, depending on each installation's requirements. More information on the program components is available on line at <http://www2.sbccom.army.mil/hld>.

The IP Program was piloted at Fort Bragg and Pope Air Force Base in North Carolina. The result was a significant increase in the installations' NBC terrorism awareness and preparedness.

Technical Assistance Team

Recognizing that buildings and fixed sites are potential targets for NBC WMD, SBCCOM established the Technical Assistance Team (TAT) as part of its Homeland Defense Business Unit at the Edgewood Chemical Biological Center at Aberdeen Proving Ground-Edgewood Area. The primary missions of the TAT are fixed site and building protection; equipment evaluation; NBC testing; and customized rapid prototyping (construction of design solutions and pre-prototypes to meet customer needs).

The TAT provides varied levels of tailored service to assist customers in protecting their buildings or fixed sites. Upon request, the team can—

- Determine the vulnerability of a building or fixed site to WMD attacks.
- Provide short-, mid-, and long-range protective solutions by customizing procedures and hardware.
- Author the specifications and scope of work for implementation of solutions.

- Serve as monitors for architectural and engineering contracts.

- Prepare for and conduct operational and certification tests of protection solutions.

- Develop followup maintenance recommendations and conduct testing to maintain the full utility of protective solutions.

- Issue recommendations for evaluating and decommissioning a building and associated protective solutions at the end of the building's useful life.

The TAT also performs evaluations of commercial detection systems and protective equipment for first responders to NBC incidents and provides independent and unbiased assessments. Results of the TAT's testing are posted on the Homeland Defense web site at <http://www2.sbccom.army.mil/hld>. The TAT conducts performance evaluations of first responder equipment, along with protective equipment from the military services, in simulated chemical agent environments. Equipment ranging in scope from single-person protective suits to the M1 Abrams tank has been evaluated in a simulation chamber. The TAT also coordinates training for first responders at the simulation chamber to demonstrate the complexities and unique concerns associated with handling NBC incidents.

The TAT offers basic and advanced training on the potential characteristics of WMD dissemination devices for personnel from the senior to the first responder levels. Simulated training devices sometimes are fabricated to provide realism during training exercises.

Through its past and continuing educational outreach programs, SBCCOM is helping the Nation prepare to react quickly and effectively to possible terrorist chemical and biological attacks. For more information, call (410) 436-3674 or visit the Homeland Defense web site at <http://www2.sbccom.army.mil/hld>. **ALOG**

—Story by Janice L. Simmons

The staff of Army Logistician thanks the Homeland Defense Business Unit of the Army Soldier and Biological Chemical Command, Aberdeen Proving Ground-Edgewood Area, Maryland, for providing material for this article.

The Army Reserve and Homeland Security Support

by Lieutenant Colonel Michael T. Snyder, USAR

The Army, the Army Reserve, and the Nation are becoming more aware of the issue of homeland security. The reason is that we live in a world in which multipolar political and economic centers, failed states, and non-state international actors like Osama bin Laden have proliferated, and many of them see the United States as a barrier or threat to their ambitions and goals. These international players seek asymmetrical means to counter the overwhelming conventional military, political, and economic power of the United States. Among these means are terrorist actions, both physical and technological, within the United States that seek to undermine our resolve or influence our response to situations that concern them. The consequences of these actions can range from the trivial to the catastrophic.

In this environment, the Army Reserve stands ready, as it has since its inception, to accomplish the tasks assigned to it by the Army and the Nation. Let me present the Army Reserve's vision of its capabilities and missions in providing logistics support to the national strategy for homeland security.

Expertise in Military Support

The Army Reserve is the primary provider of echelons above corps combat support (CS) and combat service support (CSS) to the Army. It plans, manages, and executes support to joint customers as a daily mission, both within and outside of the continental United States. It also plans, manages, and executes, under the direction of Army and joint headquarters and in coordination with other Army and joint service partners, support to numerous exercises in and outside of the continental United States each year. It continues to support the Army's missions by deploying Army Reserve units to small-scale contingencies, both as a part of the initial response forces and as a part of the force backfill, to help reduce active component operational and personnel tempo.

The Army Reserve represents a major part of the Army's generating force. It supports and augments the Army's ability to prepare forces for deployment, helps

deploy them through the Nation's internal transportation network to surface ports of embarkation, and sustains deployments by reinforcing the Army's institutional force structure and supporting installations. The Army Reserve provides a significant portion of the forces needed to open a theater of operations, which it accomplishes by opening, managing, and sustaining ports of debarkation and by planning, managing, and executing the reception, staging, and onward movement of deploying forces. Finally, it provides a majority of the forces that plan, manage, and execute CS and CSS at the theater level, sustaining the combat force in the area of operations, and a major part of the Army's capabilities for planning, managing, and executing wartime executive agency responsibilities (WEAR) and Army support to other services (ASOS).

In executing these missions, the Army Reserve looks outward to the theaters of operations. All of its deployable forces are tasked to the warfighter as its primary mission. The Reserve's nondeployable forces are linked directly to the institutional and installation Army, so they can augment and support the projection and sustainment of Army and joint forces. The Army Reserve has created as its core competencies the projection and sustainment of the Army, and of the other armed services, at the national, strategic, and operational levels of conflict. Yet the Army Reserve does have a secondary mission, one that has become more visible over the last few years.

Support During Natural Disasters

During times of natural disaster, when Federal aid is extended to state and local governments, the Army Reserve is a resource provider. It provides such assets as federally controlled manpower and equipment to Federal authorities, which then provide assistance in those functional areas that state and local governments or locally available commercial assets cannot fulfill, even if their inability is only temporary. The core competency of the Army Reserve—the projection and sustainment of Army forces—lends itself readily to such missions.

Among the missions planned, managed, and executed by the Army Reserve on a daily basis are ground, air, and waterborne transportation; medical services; local security; traffic management; field services such as water purification and distribution and laundry and bath services; the establishment and sustainment of temporary housing; and the handling and preparation of subsistence—all in support of a variety of customers and undertaken in coordination with civil and military authorities. The Army Reserve is a reserve Federal asset to which civil authorities can turn when state or local resources are exhausted or unavailable.

Natural disasters are not the only events that draw Federal, state, and local authorities to seek assistance

from the Army Reserve. The Reserve is involved continually in peacetime support of Federal agencies executing similar missions throughout the Nation.

Reserve Expertise in Homeland Security

The Army Reserve is reviewing its capabilities in coordination with the Army and other Federal agencies to identify and task its forces with the dual missions of support to the warfighter and to homeland security. In many cases, support to homeland security merely involves a change in the intended customer and operational location for an established mission, such as medical or field services. In other cases, the Army Reserve will add a mission within the parameters of a unit's functional area, such as having decontamination units conduct nuclear, biological, and chemical (NBC) reconnaissance. The Army Reserve also will add new missions, such as information and technology assurance and protection, that its blend of civilian skills and military expertise can address effectively and efficiently.

Overall, the Army Reserve views itself as being in the same position for assisting in homeland security and consequence management of security-related events as for responding to national disasters. Reservists stand ready to respond immediately when called on to provide Federal military assistance to civil and military authorities in events that threaten imminent danger to life and limb.

The Army Reserve exercises peacetime command and control of Army Reserve organizations and units through the Reserve Support Commands (RSCs), which are aligned geographically to correspond to the Federal Emergency Management Agency's regions. Though it currently is not tasked to do so, the Reserve can provide Federal authorities a locally based Army component command structure to support the Federal response to homeland security requirements, when, as, and where required and directed. Its CS and CSS commands and units are dispersed throughout the Nation, and that dispersion increases both their survivability and responsiveness. Through proper planning, Army Reserve assets can be mobilized quickly as individuals and as units and commands that are task-organized to meet the requirements of assigned missions.

The Army Reserve is prepared to support the civil authorities and those Federal and state military assets already engaged in responding to a homeland security requirement or event. It can augment where possible, and replace when necessary, local and state capabilities in these areas—



□ **The Army Reserve's ability to provide medical and other support during military deployments makes it a ready source of support to which civil authorities can turn in homeland security situations.**

- CS and CSS operations planning and management.
- NBC reconnaissance and property and equipment decontamination.
- Contract management and execution.
- Transportation planning and management.
- Ground (vehicle and rail), air, and sea transportation.
- Medical casualty decontamination and evacuation.
- Medical services at all levels of care.
- Preventive medicine and veterinary operations.
- Supply operations, especially subsistence and fuel.
- Water purification and distribution.
- Laundry and bath services.
- Temporary housing management.
- Base construction.
- Infrastructure repair and enhancement.
- Damage assessment and management.
- Repair and maintenance of transportation infrastructure (including roads, railroads, seaports, and airports).
- Food service operations.
- Processing of displaced persons.
- Security and traffic management.
- Firefighting.
- Recovery, evacuation, and identification of remains.
- Public affairs.

- Civilian-military coordination.
- Information recovery, protection, and management.
- Automation operations.

Value of Reservist Experience

The reservists performing these missions often have extensive experience gained in their civilian occupations to supplement their military credentials. They and their units are trained and have performed their assigned military tasks and missions under field conditions. They thus are prepared to employ their capabilities in the environments that could be expected to exist in the area of a significant homeland security event, including NBC situations. Their sense of personal duty and mission, combined with their military pride and discipline, will hold them to their mission when others might be dismayed or distracted.

The Army Reserve is exploring with its Active Army and Army National Guard counterparts, and in coordination with other Government agencies, what changes to CS and CSS doctrine, training, and equipment are needed to meet the homeland security mission. In most functional areas, there will be little need to change the current doctrine, training, and equipment designed to support combat operations. By responding to major natural disasters and providing support to small-scale contingencies in operations other than war throughout the world in the last 50 years, the Army Reserve has gained a body of experience and documentation on what modifications to current CS and CSS doctrine and training are needed to execute support of homeland security successfully.

Reservists' experiences in responding to consequence management and CS and CSS support requirements for nation-building and peacekeeping operations as part of multinational forces and in responding to civilian populations distressed by natural and manmade disasters will pay dividends. These actions provide the experience reservists need to manage and execute CS and CSS in support of homeland security.

Strategic Storage Sites

One initiative the Army Reserve is developing within its Army Logistics Plan XXI is the use of strategic storage sites. These controlled-humidity facilities will be located near surface ports, from which the equipment sets stored in them can be shipped quickly to a theater of operations. The equipment in storage will be drawn from Army Reserve units; to maintain their training readiness, these units will retain sufficient equipment at their home stations or will have access to equipment at centrally located regional sites.

The strategic storage sites are designed to accelerate the deployment of the Army Reserve to the warfight.

But many of these sites will be located near major urban centers, so they also can provide readily accessible equipment sets maintained at high readiness to meet civil support or homeland security missions.

Making Reserve Support Even Better

There are two significant issues that need to be addressed. First, those national military and civilian command authorities tasked with the mission of homeland security must understand that effective use of the Army Reserve requires proper planning. The actions needed to access the Reserves must be identified and planned for execution when required. Much of the delay in bringing Army Reserve units to active duty to respond to homeland security events would be eliminated if the authority to mobilize these units was planned and coordinated in advance with the relevant authorities.

Second, there is insufficient force structure to meet all the requirements that will be created by adding the homeland security mission to the existing requirement to fight two near-simultaneous major wars. The requirements to respond to and manage a major homeland security event essentially are equivalent to those needed to support a major war theater. Currently, the Army Reserve can meet the deployment and sustainment requirements for power projection and strategic- and operational-level CS and CSS within a theater for one major war immediately and for a second major war after a reasonable length of time. However, neither the Army Reserve nor the Army as a whole can meet the force requirements for three major theaters and continue to meet military-oriented treaty obligations.

The Army Reserve stands ready to respond to its assigned missions as a part of the Army and working with the other services, both active and reserve. These missions will effectively support the National Military Strategy and the defense of the Nation and its people. It is from them that the Army Reserve and all the Armed Forces derive their strength and reason for existence.

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The Asymmetric Threat

by Cadet First Class Michael L. Kolodzie, USMA

Throughout the past quarter century, the asymmetric threat has become a common form of warfare throughout the world. However, current Army doctrine fails to address the asymmetric threat adequately—and specifically, the threat to at-risk, high-value logistics assets.

The newest doctrine still in draft addresses the conduct of “full-spectrum operations” in both war and operations other than war. This doctrine incorporates the global trends that Army leaders have seen in the 1990s. However, current doctrine does not address the asymmetric threat to the Army’s substantial logistics tail, and there are no indications that future doctrine will do so.

Definition

Using key elements from the Department of Defense definition of unconventional warfare and drawing from my own understanding of asymmetric warfare, the asymmetric threat can be defined as “a broad and unpredictable spectrum of military, paramilitary, and information operations, conducted by nations, organizations, or individuals or by indigenous or surrogate forces under their control, specifically targeting weaknesses and vulnerabilities within an enemy government or armed force.”

For many nations, organizations, and individuals, asymmetric warfare is preferable to conventional warfare. The U.S. Army is arguably the most powerful and effective conventional fighting force in the world, as was demonstrated in Operation Desert Storm. Few nations and organizations have the manpower, weapons, and technological capabilities to wage a direct conventional confrontation against U.S. Armed Forces. Considering the power and effectiveness of current U.S. forces in conventional operations, it is unlikely that the Army will become involved in a sustained conventional war in the near future. However, this does not mean that the threat to the United States is any less.

Asymmetric warfare is best used against targets that traditionally have little or no protection. Logistics units and maintenance and supply assets have a high payoff in sustained operations, but they usually are poorly defended. They are desirable targets in both conventional and asymmetric warfare, but their vulnerability makes them especially attractive to nations and organizations that do not have the power to wage conventional war-

fare. Examples of possible asymmetric threats to logistics assets include enemy special operations infiltrations and attacks and the use of chemical, biological, or nuclear weapons against deep logistics assets.

Because of current global trends towards urbanization and digitization, the Army will see more ambushes, snipers, and boobytraps that will make logistics movement difficult and dangerous; more sabotage of poorly guarded logistics assets by hostile populations; and more electronic warfare specifically targeting logistics command, control, and communication resources. Military analyst Robert Hahn II states that “the current consensus is that urban areas tend to negate the technological advantages of U.S. forces, thereby forcing them to adopt unfamiliar or low-tech methods of waging war.” Throughout the last decade, the Army has experienced the range of unpredictability and difficulty that comes with urban-oriented guerrilla warfare environments such as Somalia, Kosovo, and Bosnia.

Even in operations other than war, the asymmetric threat can be present and often is intensified if there are rivalries among the people within a nation receiving support from the United States. The Army has seen this happen in Bosnia and Kosovo, where angry citizens and guerrillas demolished vehicles and planted explosive devices (often simple homemade bombs) on equipment, vehicles, defensive structures, and storage facilities. These are prime examples of the unpredictable and frustrating nature of asymmetric warfare and the problems that can occur if logistics units do not enforce proper security measures.

Avoiding Asymmetric Attacks

In future Army operations, the asymmetric threat is going to be difficult to avoid in any environment. Unlike the apparent danger of conventional warfare, the danger of asymmetric attack does not decrease significantly during operations other than war. Asymmetry is by nature unpredictable, and it could be more prevalent in Army operations other than war because the absence of heavy combat units could suggest weakness and vulnerability to adversaries eager to use asymmetric attacks.

To guard effectively against asymmetric threats, logistics security must be included in both doctrine and training. In theory, these changes should be carried out immediately in anticipation of future asymmetric war-

fare. In practice, making changes would be a massive undertaking, and the changes likely would require significant asymmetric attacks to have occurred in order to provide an experience base. This is an unfortunate truth about instituting, even minor changes in the Army.

Logistics is a vital part of any army, and it has been a limiting factor of operations since the beginning of warfare. The Army understands the importance of having efficient, fast support assets capable of sustaining operations in any environment, with any units, conducting any kind of operation. Accordingly, there are dozens of field manuals (FMs) and regulations that are intended to give force-wide guidance to commanders on logistics support. However, current doctrine does little to address logistics security. The logistics chapter of FM 100-5, Operations, goes into detail about logistics considerations and planning. None of those considerations includes security and force protection.

FM 100-5 is the doctrinal basis for Army operations, and the argument can be made that logistics security should not be addressed in a document of such broad scope. However, other doctrinal publications that cover logistics planning factors and considerations, such as Army Regulation 700-8, Logistics Planning Factors and Data Management, do not address the security of logistics units and assets. If security for logistics assets is not included in doctrine, then safety measures are an implied task for the logistics commander and for the combat units he supports. Current and future Army doctrine assumes that logistics units will maintain their security, augmented by combat units that grudgingly offer troops to provide rear area security.

This is a dangerous approach to security in a world where asymmetric threats to the Army are becoming more prevalent. Security should not be an implied task for logistics commanders. Assuming the security of rear area units in an environment with a high probability of asymmetric threats is suicidal. The safety of logistics units should be addressed directly in doctrine. Doctrine should make it clear to leaders that the enemy is less likely to engage in front-line conventional warfare against the United States and more likely to attack weak rear targets unconventionally.

Training also must address the asymmetric threat to rear units. Both doctrine and training are necessary to ensure the safety of Army logistics trains, maintenance and resupply areas, and other logistics assets on the future battlefield. To be properly prepared for the future, all leaders and soldiers, regardless of service, should be trained to think about, expect, and prepare for both asymmetric and conventional threats. Realistic training to

detect, deter, and react to asymmetric threats would allow logistics leaders to have safer, more effective units in future field operations. Logistics units training with combat units should focus on security when immersed in an unconventional, asymmetric threat environment.

This training is being conducted to some extent at the National Training Center at Fort Irwin, California, where skilled opposition forces (OPFORs) challenge logistics leaders to protect their own forces while continuing to provide maximum support to conventional front-line units. However, if doctrine continues to leave security decisions solely to the commander, logistics leaders who do not have the training or the experience to understand the importance of security will fail to prepare their units properly for asymmetric threats. Training the logistics commander to meet the asymmetric threat is of vital importance, but this training will not be effective unless it is based on sound force-wide doctrine.

Training on how to guard against asymmetric threats such as nuclear, biological, and chemical warfare; counterinfiltration; and sabotage must be realistic. OPFORs must learn how to prevent or adapt to creative, unpredictable asymmetric threats. Training must challenge our leaders to think and to take appropriate measures to provide security and force protection. Emphasis must be placed on area security, troop alertness, and routine physical inspection of equipment, vehicles, personnel, facilities, and other assets to prevent and deter asymmetric threats. The cost of preventing the loss of logistics assets and units is insignificant compared to the cost of replacing them.

The Army must strive to understand, defend itself against, and operate in a new, unconventional warfare environment. Addressing the asymmetric threat adequately and making even small changes to Army doctrine and training will require a great deal of work by Army officials. Ensuring the security of supported units must be included in logistics doctrine for both combat operations and operations other than war.

Undeniably, the face of warfare is changing. By including deterrence of asymmetric threats to rear units in doctrine and training according to the new doctrine, the Army can be a more effective force. Reducing vulnerability to asymmetric threats is vital for the Army's survival and continued dominance in future operations.

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An Antiterrorism Advisory

by Jeffrey L. Holmes

Imagine yourself lying on a white, sandy beach in a tropical paradise where your every need is met. You finally got away from the unit for some rest and recuperation, and your unit is now a million miles away in your mind. A quaint shopping area is an easy stroll from your hotel; golf is only a short ride away by courtesy van. As you enjoy the sun warming your body, you watch skiers glide over the smooth surface of the bay. In the background you hear loud noises and wonder vaguely why the staff of your hotel cannot keep things more restful. Then you hear your cabin boy calling to you, "Mister Green, Mister Green! The People's Provisional Government wants all the guests to go into the hotel. Mister Green, please hurry!"

Turning casually, you see your cabin boy running toward you across the sand. Behind him is a group of armed paramilitary men. Your swimsuit, towel, and sunscreen are no match for them. Suddenly you wish you were back at Fort Boredom. You think, "What was it those security guys said during the Level 1 Antiterrorism Awareness briefing?"

Although this scenario is purely fiction, similar events could happen. Some countries are more peaceful than ours is today, with lower crime rates and smiling, fresh faces everywhere you go. Others appear peaceful, but it is a facade made possible by quickly cleaning up the carnage from the most recent military coup. How can you tell the difference? How do you know where travel is safe?

Level 1 Antiterrorism Awareness Training

Your primary source of information on traveling abroad safely is the Level 1 Antiterrorism Awareness Training required by Department of Defense (DOD) Instruction 2000.16, DOD Antiterrorism Standards. This training is designed to remind you of basic operations security concepts. It gives you information about generally known threats around the globe and informs you of specific threats or concerns about the country to which you will be traveling. The training is required for all DOD military and civilian personnel before any official or unofficial travel outside the United States, its territories, or possessions and is valid for a period of 1 year. The training also is required for family members who are at least 14 years old when accompanying their sponsors on a permanent change of station (PCS) outside the United States or its territories. Whether the travel is

for vacation, temporary duty (TDY), or PCS, there are unique facts you need to know about the country you will be visiting. This information changes frequently. For this reason, you are required to obtain area- or country-specific information within 3 months before you travel.

In today's world, many extremists view America as the primary enemy to their particular ideology. Americans are symbols of what they despise. As a military member, a military family member, or a Federal civilian employee, you are a larger symbol, and you are at greater risk than is the general American population.

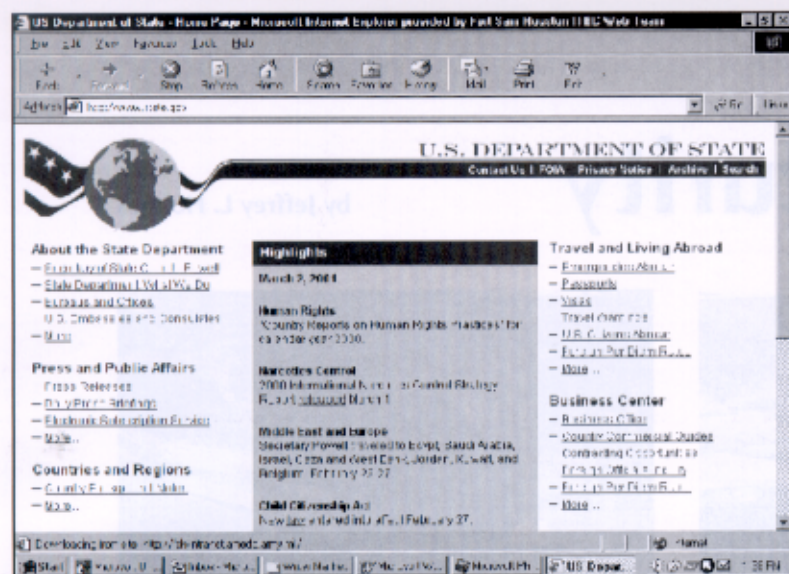
The decision to have mandatory antiterrorism awareness briefings was not made lightly. Army leaders know the time it takes to prepare and present these briefings, and the associated costs to units. However, we live in a very dangerous world, and the safest way to deal with any danger is to be thoroughly informed. You cannot prepare for danger if you are not aware it exists. The Level 1 briefing makes you aware of the current known dangers.

Department of State Web Site

You also can conduct research easily on your own to keep informed. Knowing what a country offers will allow you to get more out of the trip, whether it is for a vacation, TDY, or PCS. You certainly want to know what the country is like in general and the points of interest for the specific location you will be visiting. Learn both the good and the bad about the country.

The quickest, surest, and most timely information is located on the U.S. Department of State web site at <http://www.state.gov>. This site has a wealth of information you can use to plan any trip. It has information on how to request passports, visas, children's services, country background notes, and even employment information. The web site also has current highlights for the traveler.

For information on a specific country you plan to visit, select "Travel Warnings" under "Travel and Living Abroad." This will take you to "Travel Warnings & Consular Information Sheets." In this section, you will find public announcements, and consular information sheets. To find the consular information sheet on the country you plan to visit, either select the first letter of that country or scroll further down the page for a list of all the countries covered on the site. Most countries are



□ The Department of State web site contains a wealth of valuable information for the traveler.

safe for military and other U.S. citizens to visit, but, if there is any indication of danger, the Department of State posts warnings at the beginning of the sheet. The information sheet gives a general description of the country, requirements for entry and departure, any special requirements for minors, firearms regulations, medical information, safety and security concerns, current crime information, criminal penalties for foreigners, road conditions, children's issues, and registration and embassy locations.

For example, if you selected Colombia as your destination, you would notice immediately the warning placed at the very beginning of the consular information sheet. The associated travel warning provides additional information that tells you of whom and what you need to be watchful while there.

The "Travel Warnings & Consular Information Sheets" page also has a link to the "Current Travel Warnings and Public Announcements" site that could affect your travel decisions. This site shows you at a glance all the countries that are dangerous for Americans to visit. The Department of State issues travel warnings for countries that it recommends Americans avoid and public announcements of short-term conditions that threaten Americans in a particular country. If your orders require you to go to one of those countries, you will know to be cautious. It also is advisable to use this source while planning a family vacation.

When being stationed outside the continental United States, it is prudent to look up all the countries that border the country in which you will be living. Even if your destination is safe, the countries around it may have unstable governments or other domestic problems that could spill over into the country in which you are living.

If you live in the United States near the Mexican border, you should continuously review what is going on in Mexico. Insurgents who may be active along the border can quickly turn a pleasant day trip into a nightmare. By being aware of the names of extremist groups, the types of problems involved, and the government in charge, you will be better prepared for danger coming from those areas.

If you travel frequently, you can subscribe to Department of State updates that will inform you of various facts affecting your travel decisions, including warnings. You can subscribe to this on line at <http://www.state.gov/www/listservs.html>.

Department While Abroad

While traveling abroad, keep in mind that you are in a foreign country. No matter how well you try to blend in, you still will be recognized readily as a tourist, probably as an American, and likely as a military member. Even in many "safe" countries, there are those who see you as a symbol of what they view as a threat to their ideology. For this reason, you should always maintain a high level of vigilance. You also can reduce your vulnerability by keeping a low profile wherever you go and varying when you travel and what routes you take going to work or taking your children to school.

When you are in a foreign country, always treat mail and packages from unknown sources with caution. Avoid contact with any suspicious or unfamiliar objects you find in or near your residence or workplace. Whenever possible, leave your vehicle locked and secure.

None of this advice should cause you to become paranoid about your travel. Being cautious and aware of your surroundings will help keep you safe. Vigilance will enhance the pleasure of your travel experiences by making you more aware of the character and people of the country you are visiting. **ALOG**

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RAMP Up Physical Security

by Jeffrey L. Holmes



□ Military Police check vehicles during a random vehicle inspection.

Armey Regulation (AR) 525-13, Antiterrorism Force Protection (AT/FP): Security of Personnel, Information, and Critical Resources, is being rewritten. However, one effective program that is likely to remain in the AR is the Random Antiterrorism Measures Program (RAMP). This program is designed to be used at all threat condition levels to increase physical security awareness throughout an installation. RAMP involves the random use of measures identified in AR 525-13 for various threat conditions to make installation operations less predictable and therefore more secure.

The program usually includes searches of privately owned vehicles at access control points or other high-traffic areas on an installation. At random times and dates, security personnel check vehicle trunks or undercarriages or inspect the entire vehicle. Similarly, military police or other security personnel inspect documents to ensure the vehicles are properly registered and insured and that the drivers have valid drivers' licenses. Military police also randomly check for valid military identification at access control points, high-visibility areas such as command headquarters buildings, or high-population areas such as commissaries or post exchanges. During these identification checks, security personnel also may inspect packages and briefcases.

By varying the implementation of these procedures, the installation changes the external appearance of its physical security measures in ways that extremists or terrorists cannot predict. Use of RAMP procedures makes an installation a much less desirable target for terrorism.

RAMP procedures should include operations secu-

urity to increase awareness of unusual events throughout the installation. Orientation briefings for new soldiers, employees, and family members can include information to increase their security awareness. Military sponsored newspapers also can remind personnel to be alert at all times. For example, people should be told to watch for strangers asking questions about the post, vehicles parked where they do not belong or for long periods of time, and suspicious packages left in highly populated areas. Such incidents should be reported immediately to the building custodian, military police, or other security forces of the unit, activity, or installation.

Installations must take measures to reduce the possibility of terrorist or extremist activities. Implementing RAMP procedures and having an alert population will go a long way toward ensuring the safety of those who live and work on an installation.

ALOG

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Weapons of Mass Destruction Civil Support Teams

by Major Adrian T. Bogart III

Civil support teams are one example of how the Department of Defense supports civil authorities' efforts to meet the emerging threats of the 21st century.

Since the 1960s, the United States has dealt with a series of asymmetric threats, the potential lethality of which has increased over time. These threats include the civil disturbances of the 1960s, terrorism abroad in the 1970s, an increase in illegal drug use during the 1980s, and terrorist bombings in New York and Oklahoma City during the 1990s. Now, in the 2000s, we face these and even more sophisticated threats, including cyber terrorism and the use of weapons of mass destruction (WMD).

With the Oklahoma City bombing in April 1995, the President and Congress increased their focus on improving our Nation's ability to deter and respond to domestic terrorism. In June 1995, Presidential Decision Directive 39 delineated the responsibilities of Federal agencies in combating terrorism, including domestic incidents. Presidential Decision Directive 62, issued in May 1998, further defined responsibilities for specific agencies. Both directives called for the establishment of tailored and rapidly

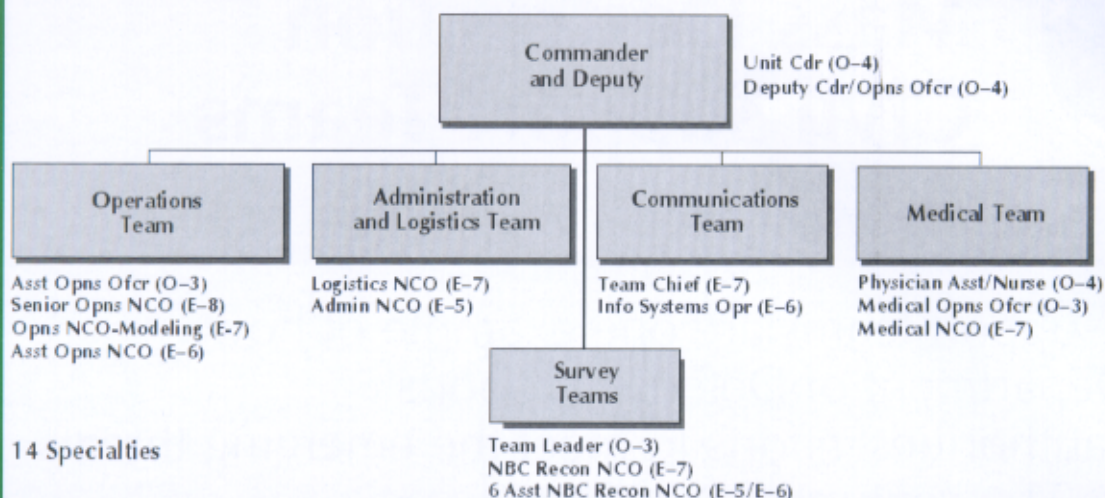
deployable interagency teams that can conduct well-coordinated and highly integrated operations in response to a crisis generated by a terrorist attack and cope with the consequences that follow (consequence management).

In 1997, the Department of Defense (DOD) commissioned a "tiger team" to develop a strategic plan for integrating Reserve Component support for response to attacks using WMD. Written by a panel of experts over 3 months, the plan defined a future operational capability based on enhancing reserve component support to civil authorities in the United States in managing the consequences of WMD terrorism. An abbreviated implementation of the plan approved by the Deputy Secretary of Defense stipulates DOD's plans to support the lead Federal agencies in their response to domestic chemical, biological, radiological, nuclear, and high-yield explosive (CBRNE) incidents. The National Security Strategy published by the White House in October 1998 specifically



□ The Murrah Federal Building in Oklahoma City, Oklahoma, after a terrorist bombing in April 1995.

Weapons of Mass Destruction Civil Support Team



mentions teams identified in the plan and incorporates a new section on consequence management. Subsequently, defense plans have incorporated military support for consequence management response.

Civil Support Team Genesis

In 1996, Congress passed the Defense Against Weapons of Mass Destruction Act (commonly called the Nunn-Lugar-Domenici bill), which directed the Federal Government to enhance its ability to deter, prevent, respond to, and recover from terrorist attacks involving WMD and to provide direct support to the "front line" of local and state emergency response organizations. In fiscal year (FY) 1999, DOD received Congressional direction and funding to organize, train, and equip 10 National Guard WMD Civil Support Teams (CSTs) to develop a military capability to meet the pressing demands of this emerging threat as part of a state's emergency response structure. Congress authorized the fielding of 17 additional teams in FY 2000 and 5 more in FY 2001, for a total of 32 teams.

Unit Stationing and Response

The 27 CSTs established to date are based in Colorado, Georgia, Illinois, California (two teams), Massachusetts, Missouri, New York, Pennsylvania, Texas, Washington, Alaska, Arizona, Arkansas, Florida, Hawaii, Idaho, Iowa, Kentucky, Louisiana, Maine, Minnesota, New Mexico, Ohio, Oklahoma, South Carolina,

and Virginia. The locations for the teams were chosen to ensure the fastest response times to reach the greatest number of people, minimize response times within a geographical area, and reduce the overlap with other teams' areas of responsibility. The distribution provides optimal response coverage for the entire population of the United States.

The teams can respond from their respective home stations by ground transportation to emergencies within a 250-mile radius within 8 hours, depending on location, weather, and road conditions. Response beyond the 250-mile radius may require the use of rotary- or fixed-wing aircraft. All of the team's equipment is air transportable.

Governor's 911 Force

The CSTs are designed to assist state civil authorities in managing a WMD emergency. Each team is commanded by a lieutenant colonel and staffed jointly with Army and Air National Guard personnel in 14 occupational specialties. Each team's State National Guard provides personnel, stationing, and common support. The State Adjutants General employ the CST to support their home state's or another state's response under the direction of the supported governor. As the "Governor's 911 Force for WMD," the CST contributes greatly to a state's ability to respond effectively to a domestic WMD emergency.

The CSTs are intended to operate principally under the provisions of Title 32 of the United States Code un-



□ Two WMD-CST members in training at Fort Leonard Wood, Missouri.

der the operational control of the supported governor. If Federalized, the CSTs will support the designated lead Federal agencies (identified in the Federal Response Plan prepared by the Federal Emergency Management Agency [FEMA]) responsible for consequence management emergency support functions and will operate under the command and control of the Joint Task Force for Civil Support. This task force, which is based at Fort Monroe, Virginia, is the U.S. Joint Forces Command's command and control element for DOD forces conducting consequence management support operations in response to a domestic WMD event.

Mission and Organization

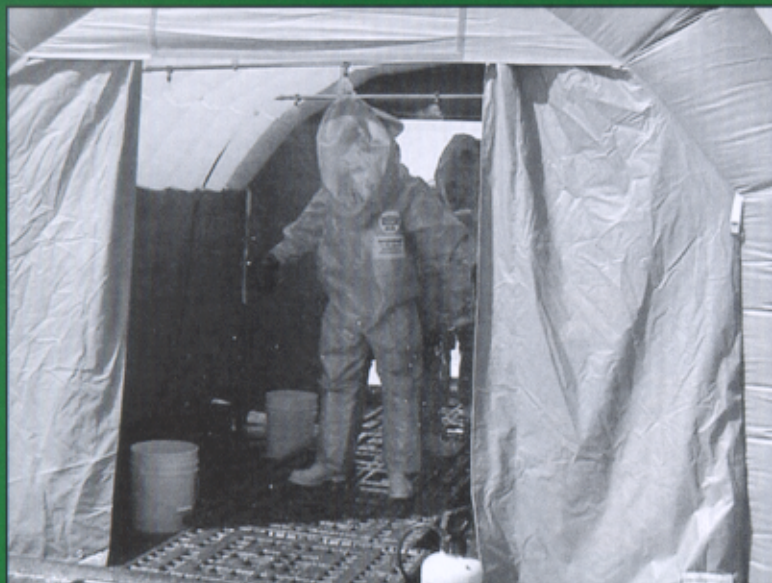
The CST mission is to assess a suspected WMD incident, advise civilian authorities on appropriate response actions, and facilitate the arrival of additional state and Federal military forces. Each team consists of 22 full-time Army and Air National Guardsmen who have been trained and equipped to provide technical advice and "reach back" to other military experts who can assist the incident commander. They can deploy rapidly, upon a governor's request, to a suspected or actual incident site, conduct reconnaissance to determine the nature of the event, provide situational understanding and technical consultation to local authorities on managing the effects of the incident to minimize the impact on the civilian population, and facilitate follow-on military support performing validated requests for assistance. The CST also can provide vital information about the situation to other response units that may facilitate their employment.

CST Training and Equipment

The CST members follow an in-depth emergency responder training program. They undergo more than 600 hours of initial training over and above their military occupational specialty qualification or professional military education requirements. Several DOD schools and other agencies such as FEMA, the Department of Justice, the Environmental Protection Agency, and the Department of Energy provide the instruction.

The CSTs have sophisticated detection, analytical, and protective equipment that allows them to work in environments that contain many different kinds of caustic substances and chemicals that could threaten life and health. High-frequency, ultra-high frequency, very high frequency, Ku-Band satellite, and FM radios and secure and cellular telephones help provide interoperability among both civilian and military forces responding on scene.

Based on the teams' mission and the threats they potentially could face, and after intensive equipment reviews and comparisons, the teams were fielded with a combination of 30 percent Army standard equipment and 70 percent commercial off-the-shelf equipment. The approximately 90 line items authorized on each team's table of distribution and allowances comprise six categories of equipment: service common, standard chemical defense, mission unique, nonstandard operational, nonstandard chemical defense, and a response vehicle fleet. Interoperability with the civilian first responders or emergency responders (fire and rescue personnel, hazardous materials units, and emergency medical technicians) was a key consideration in the equipment se-



□ A soldier in training at Fort Leonard Wood, Missouri, enters a decontamination tent.

lection process. The Interagency Board (IAB) for Equipment Standardization and Interoperability, a user-level organization of leading responders and subject-matter experts from various local, state, and Federal government organizations, used the CST equipment list as the basis for developing a standardized equipment list that has been available to the interagency community in preparing for and responding to WMD incidents. The Attorney General has distributed this list to local and state agencies requesting Department of Justice grants to improve their WMD response.

Equipping and Supporting the CSTs

DOD relied on the expertise and support of the Army Soldier and Biological Chemical Command (SBCCOM) and the Marine Corps Systems Command in equipping these small, highly specialized response units. This joint effort was vital to the rapid fielding of equipment, integration of industry support, and leveraging of DOD's unique skills and infrastructure.

Currently, the Defense Consequence Management Support Center (SUPCEN) supports and sustains WMD response forces through a central organization consisting of a supply support activity, an emergency resupply activity, and a support coordination center. The SUPCEN provides stock management and warehousing, technical services, and integrated logistics support. The SUPCEN has the capability to expand its operations to 24-hours-a-day, 7-days-a-week during contingencies, major exercises, and national security special events.

The Naval Air Warfare Center's Aircraft Division designed, acquired, and fielded the Unified Command

Suite (UCS) communications vehicle. This nondevelopmental system provides access to standard military and civil response agency communications systems and provides the CSTs with a robust capability to communicate with local, state, and Federal agencies. The UCS also provides reach-back communications to a variety of technical and scientific experts who can supply technical assistance and guidance. This system is crucial in reaching military experts throughout the United States to provide timely advice or assistance to the local incident commander.

The establishment of the CSTs is an example of how DOD supports civil authorities' efforts to meet the emerging threats of the 21st century. Together, Federal, state, and local governments have mustered their collective strengths in an effort to ensure that our Nation is ready to defend against, and recover from, accidental or intentional WMD incidents.

ALOG

Major Adrian T. Bogart III is the Chief of Strategic Plans and Programs in the National Guard Bureau's Civil Support Office in Arlington, Virginia. A Special Forces officer, Major Bogart is responsible for domestic consequence management planning, programming, and management of central operational support programs for the National Guard's consequence management and civil support activities. He holds a civil engineering degree from Virginia Military Institute.

Deep Attack— And I Do Mean Deep

by Dr. Burton Wright III

Current Army doctrine found in the 100-series field manuals discusses the domination of the battlefield in terms of attacks that are deep, close, and rear. During Operation Desert Storm, coalition air and ground forces carried out such attacks with speed, power, and determination. Iraq's army was hit from the forward edge of the battlefield back to Baghdad. But what if those deep attacks had involved operations against Iraq's industrial infrastructure before the war began? That would have reduced the enemy's means of supporting an army in the field. If the attacks had been devastating enough, there would have been no war.

World War II Saboteurs

In the summer of 1942, eight agents from Germany landed on the shores of the United States. They were not spies, but saboteurs. They came specifically to attack American industry. The German Military Intelligence Service (the Abwehr) had spent months training these men. The Abwehr had taught them how to use both prepared and improvised demolitions to cripple or destroy factories, rail lines, and shipping. The German agents came armed with a plethora of ingenious sabotage equipment.

Although German dictator Adolph Hitler did not think much of U.S. industrial capabilities, some of his subordinates did, and they believed that if American industry could be crippled, it could not become the "arsenal of democracy." Whether they knew it or not, those members of the Abwehr who planned the sabotage that was dubbed "Operation Pastorious" had the right idea. However, in those days, eight operatives were not enough to do the job. It would have taken hundreds. That is not the case today.

Increased Capabilities

Today, science has given well-trained individuals the ability to magnify their numbers and to do horrendous damage to the industrial underpinnings of a nation. Weapons of mass effect (WME) have this capability, and I am not referring just to nuclear weapons. Technological, chemical, and especially biological weapons can be used to attack key industrial facilities and wreck a

nation's ability to move its military to key areas and support them there.

Biological Threats

Food is as much a necessity of war as anything else. Damaging a nation's food sources could inhibit its ability to wage war effectively. Troops no longer can just live off the land.

Right now, there is an outbreak of hoof and mouth disease in England. There are rumors it has reached North America and mainland Europe. This disease is highly contagious and fatal to cattle and other cloven-hoofed animals. Humans cannot get hoof and mouth disease, but they can die from eating the meat of animals infected with mad cow disease, which also has plagued English cattle in the past few years. The hoof and mouth disease outbreak, combined with the minor outbreaks of mad cow disease, may have crippled the English beef industry for the time being.

The situation with the English beef industry presents an example of how a biological WME could affect a country. Suppose someone wanted to damage the English beef industry. Since hoof and mouth is so contagious, it would be easy to spread the disease to all the cattle-producing areas of England. The saboteur would need only a live virus, a means of dissemination, and a car.

Using other types of biological WME that are not lethal—that is, not aimed at humans—a clever country with a reasonable plan could bring about chaos in the world, in a specific area, or in a single nation. For example, if the wheat crops of the major wheat-producing nations were infected with "wheat blast," a fungus that destroys wheat plants, many people soon would be short on rations.

During and after World War II, the Army Chemical Corps' biological experimentation facility at Fort Detrick, Maryland, spent a considerable amount of time developing crop diseases as well as ways to defend against them. The United States had decided early on that not only its military and civilian populations but also its animals and crops were at risk. Fort Detrick spent as much time developing defensive capabilities as

it did offensive capabilities. Eventually, this important job was turned over to the Department of Agriculture. Today it would be difficult for an enemy to infect U.S. livestock or crops without the Department of Agriculture discovering it and taking action, but it could be done.

In 1918, a pandemic influenza (flu) ravaged most of the known world. Today, we expect flu every year. We have flu vaccines, but they are not 100-percent effective. A specialized, virulent flu virus not affected by vaccines could threaten a nation's security. A nation suffering a rampant flu epidemic would be vulnerable not only to direct attack but also to subversive attack.

Technological Threats

If the United States is to have an army capable of highly technological operations in the 21st century, it must have an industrial base to match. The weapon systems the Army takes with it often are complicated, expensive, and difficult to replace, and they require a mountain of spare parts. If the support base cannot supply the spare parts, then the weapons are useless and the war cannot be won.

Industries, which have more security than do agricultural concerns, also are vulnerable to attack. Take the "I Love You" computer virus as an example. The person who developed it was not a computer genius. Yet the virus cost millions of dollars in lost revenue and tied up computers for several days. A nation could cripple another nation's computer systems.

Likelihood of WME Attacks

Could WME attacks happen in the United States today? Yes, they could. Using WME makes sense for several reasons. First, it would be easier to use biological, chemical, or technological WME against industrial or agricultural targets than against government or military targets because there is usually less security surrounding industrial or agricultural operations. Second, it would be more difficult for a target to determine that it was under attack if the attacker used commonly expected diseases and artfully infected the host at irregular intervals so as not to alert the U.S. Government to a pattern. Finally, even if a nation was identified as the perpetrator, how could the United States retaliate militarily when there was no direct military attack on the American people? Would Congress authorize an attack against Iran if they were identified as having spread hoof and mouth disease in the United States?

Worst-Case Effects of WME Attack

WME can be especially effective if they are used at

the right psychological and economic time. Envision a country in a deep recession, and then pile on more and more unfortunate problems (all planned in sequence by an enemy, of course), such as an outbreak of a particularly bad flu, crop problems, and computer viruses. More people are out of work, more people become apathetic, and the population becomes restless, thereby causing radical behavior by either the Government or individuals.

Hitler came out of such a milieu. Remember that Germany was just beginning to climb out of its post-World War I economic problems when the depression hit in the United States and spread to Europe. With millions of people out of work and others nearly destitute, the mood of the German people began to swing radically right. Someone like Hitler normally would have ended up as a political sideshow, but Germany was ripe for his message, and people began to believe him.

All major industrial nations are vulnerable in many ways to the type of warfare described in this article. Dominance on the battlefield is based heavily on weapon systems produced by a powerful industrial base. Take that base away, and the military becomes less and less powerful over time. It also is less able to project its power around the globe, which allows an enemy to make headway.

It is very possible that in the next two decades, a small nation with a good research and development program will develop WME. Such a nation has little to lose and everything to gain by using those weapons. With a WME program, it could "level the playing field" without real danger to itself. If a WME program ever is developed, it will be used.

If we as a nation realize this danger and come to grips with it, we can snap back much more quickly because an attack can be recognized from the beginning. It will be nearly impossible to stop such an attack; there are just too many ways to smuggle the necessary ingredients into an open society. If such an attack happens, we must act aggressively to contain it and minimize the damage done. Forewarned is forearmed.

Today, eight saboteurs landing at Kennedy Airport in New York can do far more damage than those German agents could six decades ago. They now have the power.

Dr. Burton Wright III is the historian at the Army Chemical School at Fort Leonard Wood, Missouri.

The Right Address: Making the Single Stock Fund Work

by Lieutenant Colonel David C. Ochs, USAR,
and Chief Warrant Officer (W-5) Holmes Benge, USA (Ret.)

As the Army implements the Single Stock Fund, logisticians at Fort Lewis are finding that one of the keys to success is making sure that unit and activity addresses are up to date.

When the Single Stock Fund (SSF) was implemented at Fort Lewis, Washington, one of the significant problems discovered was the entry of inaccurate or outdated unit or activity Defense Automatic Addressing System (DAAS) information into the Department of Defense Activity Address File (DODAAF). In many cases, information entered into the DODAAF dated to the establishment of the very familiar Department of Defense Activity Address Codes (DODAACs) in the early 1970s. Often, while a unit had remained on the installation, it had been redesignated or had moved to a new location (such as a new building number, street address, or ZIP Code). In some cases, units and activities had relocated to other installations in the continental United States or overseas.

From a procedural standpoint, any changes to a unit or activity address are supposed to be passed to the installation DODAAC coordinator for input into the DAAS. However, few unit personnel are familiar with the procedures or the requirements for keeping the DODAAF updated. From our experience at Fort Lewis, this lack of familiarity translates into logistics transactions that are frustrated by a very simple problem: the DAAS and DODAAF have the wrong location information for receiving units. If you are working in a battalion or brigade S4 shop, transportation movement control office, materiel management center, supply support activity, installation DODAAC coordinator office, or a similar unit or activity, and if you would like to ensure that repair parts are routed to the correct destination or received in a timely manner, then you may benefit from our experience.

The Situation Before the SSF

Before the transition to the SSF business process environment, few, if any, problems resulted from inaccurate addressing information recorded in the DODAAF database. Often, supplies earmarked for a particular unit were shipped to the installation's central receiving point (CRP) for further breakdown to the requesting unit. Because the shippers knew that the CRP was the only activity to receive supplies for the installation, everything came to the CRP for further distribution within that installation. The same was true for a supply support activity that supported a large number of customer units. While address problems were common, the relationship between the CRP or the supply support activity and the supported customers meant that the supplies generally reached the right units anyway.

The Need for Accurate Addresses

With the Army's conversion to the Standard Army Retail Supply System-Objective (SARSS-O) in the early to mid-1990s, inaccurate addresses became a significant logistics problem. SARSS-O required users to place greater emphasis on the accuracy of DODAAF addressing information, especially the information recorded for SARSS-1 supply support activities. Referrals among installations and the beginning of dedicated direct delivery (door-to-door) truck shipments from the supporting regional depot to the warehouse dock of the supply support activity—intentionally bypassing the CRP—further emphasized the need for accurate DODAAF addressing data for SARSS-1 supply support activities.

The phased implementation of the SSF has only in-

creased the importance of accurate DODAAF information. Under the SSF milestones 1 and 2 environment, each SARSS-1 Army Working Capital Fund supply support activity becomes a forward storage activity of the Army Materiel Command. At milestone 3, current operations and maintenance SARSS-1 activities will be in the same category. As a result, for the SSF concept to function as designed, it is essential that the DODAAF addressing information for every SARSS-1 supply support activity be accurate.

The conversion to SARSS-O ushered in the widespread use of routing identifier codes (RICs) to further identify the supporting SARSS-1 supply support activities. However, as we worked on SSF implementation at Fort Lewis, we uncovered some surprising facts about the DODAAC and RIC information recorded in the DAAS for SARSS-1 supply support activities. Frequently, the type address code (TAC) information for DODAACs listed in the DAAS is not correct. The increasing use of Federal Express (FedEx), United Parcel Service, and other commercial carriers to transport supplies from point to point makes it extremely important that the DODAAC and the RIC TAC 1 (mailing) and TAC 2 (shipping) address information are recorded accurately in the DAAS.

In order to assist our supported units at Fort Lewis, we developed procedures for ensuring address accuracy. We recommend that they be considered for adoption throughout the Army in conjunction with SSF implementation.

Two steps should be taken to validate the DODAAC and RIC address information recorded in the DAAS for a SARSS-1 SSA. The first is a DAAS inquiry. The second is validation of the address through the United States Postal Service (USPS).

DAAS Inquiry

To conduct a DAAS inquiry, your first step should be to access the DAASINQ (DAAS Inquiry) web site at www.daas.dla.mil/dodaac/dodaac. From that web site, it is possible to find the valid DODAAC or RIC for any DOD activity.

The first check in the DAASINQ is a DODAAC inquiry. As an example of a DODAAC inquiry, let's use the SARSS-1 supply support activity of the 296th Forward Support Battalion, 3d Brigade, 2d Infantry Division, at Fort Lewis. The DODAAC assigned to the supply support activity is W81X9C. After entering W81X9C, the computer screen shows the TAC 1 (the mailing address) and TAC 3 (the billing address) for

that DODAAC. The TAC 2 information (the shipping address) may not be displayed because the supply support activity's mailing and shipping addresses could be the same; the TAC 1 block therefore contains the shipping information as well as the mailing address. [Shipping information normally is contained in the TAC 2 block for units outside the continental United States. The postal mailing address may be in the TAC 1 block, and the "ship to" information may be in the TAC 2 block for units outside the continental United States.]

The important elements of the address block that must be validated are the unit or activity name, the correct building number and street name address, the "city" name, and the ZIP Code. Note that FedEx policy prohibits acceptance of a shipment without a street name in the delivery, or "ship to," address block. This information must be a part of the DAAS address information so SARSS-1 can print the "ship to" address information on the materiel release order and other transportation shipping documents.

The second check in the DAASINQ process is a RIC inquiry. In an example using RIC WA3, associated with DODAAC W81X9C and the 296th Forward Support Battalion, the TAC address information screen must agree with the TAC information validated in the DODAAC W81X9C inquiry. However, in our example, the TAC information shown on the screen for the RIC and DODAAC do not agree. The RIC inquiry screen shows the SARSS-1 supply support activity located at Fort Riley, Kansas; this, of course, is incorrect, because the supply support activity is located at Fort Lewis. The RIC address information must be validated and then corrected through the major subordinate command's RIC coordinator so that it agrees with the address information listed for the DODAAC. (Note again that, as with the DODAAC, the shipping information shown in the TAC 1 block for the RIC may be located in the TAC 2 block for most units outside the continental United States.)

USPS Address Validation

The second step in the RIC and DODAAC validation process, after the DAAS inquiry, is the USPS address validation. The ZIP Code, city name, or ZIP Code-and-address combination may be validated at the USPS "ZIP + 4 Code Look-up" webpage, found at http://www.usps.gov/ncsc/lookups_zip+4.html.

To validate the address and city information found in the DAAS inquiry process, the address information is entered on the "ZIP + 4 Code Look-up" page. It is important to point out that the names of most Army Na-

tional Guard and Army Reserve and some active Army installations do not serve as valid city names. In those cases, the city or town outside the installation will be the valid "city" entry. For example, Fort Pickett's "city" is Blackstone, Virginia.

If the address and city information are not valid, the "ZIP + 4 Code Look-up" will display the "not found" screen. It then is necessary to return to the "ZIP + 4 Code Look-up" webpage and select the highlighted "City/State/ZIP Code Associations" link at the bottom of the screen. On the "City/State/ZIP Code Associations" page, the "city name" from the DAAS DODAAC or RIC TAC 1 or TAC 2 block can be entered to validate the name in the USPS city name database.

If the city name was not valid, this same page can be used to verify the ZIP Code information. The verified ZIP Code will show the associated city name. The result returned for ZIP Code 23824-5000, for example, would identify the city name for Fort Pickett as Blackstone, Virginia. The corrected information found through this USPS site must be passed to the installation DODAAC coordinator for submission of a change to the DAAS to change the city name (in this case, from Fort Pickett to Blackstone).

When all else fails, the USPS may provide the answer to finding difficult-to-locate units or activities. If you have only minimal information, such as the installation name, the first step in finding help is to contact the nearest USPS Address Management System office. To locate that office, access the USPS homepage at <http://www.usps.com> and select "Address Quality" on the gray tool bar. On the "Address Quality" webpage, select "Address Management System (AMS) Office Locator." On the resulting screen, either the large city nearest to the installation or a ZIP Code can be entered. The telephone number for the appropriate Address Management System Office then is displayed. Calling this office should assist greatly in finding valid city names and ZIP Codes.

If the DAAS information is not correct, the initiator of a DODAAC change to the TAC 1 or TAC 2 address should contact the installation's Army Network Station (ANS) DODAAC coordinator, who can update the DODAAC information using Rapid Update (RDUP) software. DODAAC coordinators who have difficulty entering a DODAAC change or need research assistance can contact the Logistics Support Activity (LOGSA) at (256) 313-2494/-2496 (DSN 897-2494/-2496). The initiator of a RIC change to the TAC address should

make a formal, written request with a justification for the change and its effective date to the major subordinate command Deputy Chief of Staff for Logistics (Supply Maintenance Branch) RIC Coordinator. The RIC Coordinator at the command approves and forwards the change request to LOGSA.

While this article is directed toward those individuals dealing with the DODAAC and RIC who are assigned to a supporting supply support activity, any unit DODAAC listed in the DAAS may contain incorrect information. Take a few minutes to investigate your DODAAC and validate the address information. Remember, your unit TAC 2 address (your shipping address) should be the same as the DODAAC TAC 2 (or TAC 1, if the TAC 2 field is not filled in) of your supporting SARSS-1 supply support activity. Your TAC 1 address should be the same as your unit USPS mailing address.

If you find errors or inaccurate entries, now is the time to rectify them. SSF milestone 3 operations will make it much more important that you ensure that entries for your DODAAC TAC 1 and TAC 2 are correct in the DAAS.

ALOG

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Kosovo Bound

by Captain Robert R. Riggsby

Commanding a maintenance company on a real-world deployment proved to be very different from the author's previous command experience.

After serving as a company commander for 13 months and participating in several rotations through the Combined Arms Training Center (CATC) in Grafenwoehr, Germany, and the Combat Maneuver Training Center (CMTC) in Hohenfels, Germany, supporting the 1st Armored Division's 1st Brigade Combat Team (BCT), I thought I had some idea of what it took to command a company on a mission. I quickly learned how much my perspective would change when I was selected to command a forward support battalion (FSB) maintenance company during a real-world deployment to Kosovo as part of Kosovo Peacekeeping Force (KFOR) 2A. Peace support operations in Kosovo would require far more than providing direct support maintenance to a BCT. In Kosovo, my company would assume responsibility not only for more customers and more equipment but also for unique missions requiring additional capabilities. No longer could we be satisfied with the way we had provided mission support in the past. We would have to adjust our attitudes if we wanted to succeed.

Predeployment Activities

Bravo Company, 501st FSB, 1st Brigade, 1st Armored Division, received a warning order in the spring of 1999 to be prepared for possible deployment to Kosovo to support Task Force Falcon. The company readjusted its focus from high-intensity conflict mission support to peace-enforcement operations support.

Before beginning any task-force-level training, Bravo Company supported the battalion-supervised individual readiness training (IRT) lanes set up at the Friedberg Training Area and the Ray Barracks Kaserne in Germany. The IRT consisted of several tasks that represented what we would encounter in Kosovo. Every soldier had to show a high level of proficiency in each

task before he deployed. Results varied, and the level of difficulty was such that soldiers within the company suffered through repeated "no-goes," which meant extensive retraining.

The company furthered its train-up by providing gunnery support to the 1st Brigade Combat Team at the CATC in March 2000. During that time, the company successfully integrated personnel from the division's 123d Main Support Battalion (MSB). This time was used to improve weapons qualification at both the individual and crew-served levels and to prepare the company for the upcoming mission rehearsal exercise (MRE) at the CMTC in Hohenfels.

The purpose of the MRE was to replicate what the task force and, in particular, its maintenance company would experience while in Kosovo. The MRE presented several scenarios in which we would operate while managing day-to-day direct support maintenance mission requirements. The scenarios included convoy operations; LOGPAC [logistics package] escort with recovery assets; split-based operations; reaction to sniper attacks, a known minefield, an ambush, and an unauthorized checkpoint; and support of medical and dental civilian action program missions. The task force commander wanted to ensure that we would not experience something for the first time in Kosovo; instead, we would experience it in a forgiving training environment like Hohenfels.

Following its return from Hohenfels, the company quickly set about preparing its soldiers for deployment. This included the coordination of household goods and personally owned vehicle storage, additional weapons qualification, personnel deployment processing, deployment briefings, and other activities. There was also a tremendous amount of work involved in preparing the company's equipment for deployment. Packing

CONEXs and performing vehicle preventive maintenance checks and services were high priorities during the workday. Hand receipts had to be split and accountability established for property that was remaining behind during the deployment.

Organizing for Success

During deployment, the maintenance company's mission would be to provide direct support maintenance at Camps Montieth and Bondsteel in Kosovo and Camp Able Sentry in Macedonia in support of Multinational Brigade (East) peace-support operations while maintaining the ability to transition to high-intensity conflict at a moment's notice. This meant that the support we would provide would be very different from doctrine. We needed not only more personnel but also capabilities not normally found in a divisional FSB maintenance company.

Bravo Company became a special hybrid company composed of additional personnel and capabilities. Habitual support relationships were combined with an area support requirement that represented a twofold increase in customers. The company had to support not only the standard six battalions and associated separate companies of a brigade combat team but also an additional infantry battalion from a continental United States (CONUS) installation, an additional military police battalion, various civil affairs units, several Army National Guard and Army Reserve units, and a mobile surgical hospital. With the exception of a four-person maintenance support team (MST) that supported the CONUS infantry battalion, none of the units came with a direct support capability.

In addition, the variety of supported equipment taxed the experience level of the mechanics and inspectors of Bravo Company. Special engineer paving equipment, family of medium tactical vehicles trucks, the small unit support vehicle, tactical quiet generators, M224 60-millimeter lightweight company mortars, an M119 105-millimeter towed howitzer, and M1114 up-armored, high-mobility, multipurpose wheeled vehicles (UAHMMWVs) combined to make things interesting as we adjusted to the additional workload.

Split-Based Operations

Bravo Company was split among four locations while deployed. The company headquarters was established at Camp Bondsteel and given approximately half of the company's assets. Separate maintenance support detachments were established at Camp Montieth and Camp Able Sentry. In addition, a rear detachment was established at our home station in Friedberg, Germany, to support the brigade's remaining armor battalion as it con-

ducted rear detachment operations and provided gunnery support to the CATC and MRE support for the KFOR 2B rotation at Hohenfels.

Each location's mission was tailored according to its customers' needs. This tailoring resulted in the establishment of a Standard Army Maintenance System-1 capability at three separate maintenance control sections at Camp Bondsteel, Camp Monteith, and Friedberg. The Camp Bondsteel maintenance control section supported the 2-37th Armor MST (-) remaining at Camp Able Sentry. The 16th Engineer Battalion MST and the 2-3d Field Artillery MST deployed to the same area as the battalion headquarters of their habitually supported customers.

Determining where to place the limited assets located in the base shops was difficult. We gave priority to the locations our higher headquarters had determined to be critical. Therefore, one of the two available armament direct support electrical systems test sets (DESESTs) was located at Camp Bondsteel to support the supply support activity's reparable exchange program, and the other was placed at Camp Montieth to support the armor task force. The missile team was located at Camp Montieth with the mechanized infantry task force, while the artillery and engineer MSTs were split to provide support at both Camp Bondsteel and Camp Montieth.

It was easy to split personnel in the Engineer, Service and Recovery, Electronic Light Maintenance, and Armament Sections among all four locations. The difficulty came when determining where to put the equipment. After much thought, we decided to place critical capabilities and equipment such as the halon recharge/service kit, the air-conditioning refrigerant management system, the gas-metal arc welder, fuel and electrical reparable exchange assemblies, the battery shop, and the majority of the recovery assets at Camp Bondsteel. The missile-repair capabilities were placed at Camp Montieth. A DESEST, a Single-Channel Ground and Airborne Radio System and other communications equipment and repair capabilities, and an arc welding trailer were located at each camp. Finally, both Camps Bondsteel and Montieth had a DESEST for the UAHMMWV.

Because it was remotely located and had more customers with equipment not usually associated with a brigade combat team, Bravo Company needed extra capabilities and assets. The biggest asset it received from the 123d MSB was a Fuel and Electrical Section. This four-soldier section and its automotive, generator, and starter test stand contributed significantly to the maintenance company's mission and supported the battalion's cost-avoidance efforts by returning reparable exchange items to the task force supply support activity for reis-

sue to other task force units. In the first 150 days of deployment, this section posted a total cost avoidance of \$325,000. Bravo Company also was able to get an allied trades specialist from the MSB. While this soldier did not deploy with any special allied trade equipment, he was able to support the company maintenance effort by working with the Aviation and Support Battalion's Allied Trades Section and with Brown & Root Services in their Allied Trades Department. The maintenance company also was able to get additional special tools and equipment to use while deployed.

Tech-1 Scan Tool

Bravo Company quickly identified a maintenance capability shortfall in Kosovo. Because of the large number of M1114 UAHMMWVs at Camps Bonsteel and Montieth, the need for special tools and equipment to diagnose and repair faults in those vehicles soon became apparent. To solve one of the major problems with the transmissions, the unit purchased two Tech-1 scanners to isolate and diagnose faults in the M1114's 4L80-E transmissions.

The Tech-1 is a lightweight, handheld, digitized scanner with LED (light-emitting diode) read-out and a menu-driven program that can monitor several functions simultaneously within the 4L80-E transmission. The scanner monitors the transmission while it is operating rather than relying on data stored within the transmission's computer. The Tech-1 substantially reduced the number of transmissions replaced. The company was able to adjust faulty transmissions or replace inexpensive parts rather than entire major assemblies.

Brown & Root Maintenance Capabilities

Brown & Root Services was a combat service support multiplier to Task Force Falcon. It provided maintenance support from the organizational level to the general support level. Brown & Root has the equivalent of two maintenance companies' worth of personnel, as well as experience in operating in Kosovo and Macedonia. Brown & Root provides on-site support to two maintenance facilities in Kosovo (one located at Ferizaj near Camp Bondsteel and the other at Gnjilane near Camp Montieth) so the units can focus on their own missions and force protection. At the organizational level, Brown & Root performs both scheduled and unscheduled maintenance for all units. This coverage has been very beneficial to several units that have no organic maintenance assets in theater. For Bravo Company, Brown & Root serviced vehicles and replaced or repaired tires. This support freed up the company's organizational mechanics to focus on unscheduled maintenance required by the operating tempo of certain sections in the battalion.

While it is possible for Brown & Root to conduct direct support maintenance, the 501st FSB's policy was to evacuate jobs only when our backlog prevented timely repair and the result would impact a Task Force Falcon unit's mission. Brown & Root conducted various general support maintenance efforts. Most notably, Brown & Root repaired several M1114 UAHMMWV frames after receiving approval from the Army Materiel Command (AMC) to perform the maintenance.

Brown & Root Training Program

During a guided tour through the Brown & Root maintenance facilities in Ferizaj, we noticed that a number of military retirees with maintenance experience were working there. It soon became apparent that their level of maintenance experience far exceeded that of the young soldiers in our maintenance company. When we discovered that Brown & Root had a training program for local national hires, we asked if the program could be tailored to fit the training needs of the Bravo Company's mechanics. Brown & Root agreed to provide our soldiers hands-on training in machining, welding, and fabrication; inspection procedures; and light and heavy wheeled vehicle maintenance.

Both parties benefited from this training experience. Bravo Company soldiers became better trained mechanics and more experienced inspectors, and the Aviation Support Battalion's Allied Trades Section had an opportunity to hone its skills as well. Each 2-week training period provided experience that improved the overall level of each soldier's proficiency in his military occupational specialty. In return, Brown & Root received 2 weeks of production support from each team of soldiers that rotated through the program.

Additional Logistics Support

The 501st FSB became a much larger organization when it deployed to Kosovo. In addition to the 123d MSB and a corps support battalion's transportation slices falling under the FSB, several organizations had representatives in country to support the task force. We soon discovered that, without repair parts or technical assistance in diagnosing and repairing faults, Bravo Company would have a difficult time supporting the task force. The organizations that could provide the most assistance included a Defense Logistics Agency (DLA)-Europe Contingency Support Team (DCST), an AMC logistics support element (LSE), and several Oshkosh Truck Corporation field service representatives.

Because DLA and AMC could track a repair part or special tool anywhere in the world and get it released for immediate shipment to Task Force Falcon while providing on-site technical expertise support, Bravo Com-



□ Bravo Company soldiers bring order to the scrap metal pile.

pany was able to maintain task force fleets at higher than Department of the Army averages. The DCST provided support to the company through a repair parts materiel management element in the FSB Administrative and Logistics Operations Center at Camp Bondsteel. The DCST's forward presence and ability to direct the 4.1 million items under DLA management wherever they were needed enabled it to provide specialized logistics service to Task Force Falcon.

The AMC LSE-Kosovo added to the logistics effort by integrating wholesale-level logistics support for the task force. On-site logistics assistance representatives from AMC provided the maintenance company with the necessary expertise in the field to find solutions to problems at the local level. AMC LSE-Kosovo is organized to support all task force equipment, but the ground combat team supporting automotive/track and armament systems and the communications/military intelligence team supporting satellite communications, mobile subscriber equipment, and intelligence and electronics warfare were critical to the company's success. In Kosovo, logistics assistance representatives provided an additional level of expertise that was just a phone call away.

Oshkosh provided on-site support for all Task Force Falcon tracked fleets, including the M1 Abrams main battle tank; the M2 Bradley fighting vehicle; heavy, expanded-mobility tactical trucks; palletized load systems; super heavy equipment transporters; the engineer fleet (consisting of M9 armored combat earthmovers, armored vehicle launch bridges, and M88 recovery vehicles), and the M113 family of tracked vehicles. Oshkosh's assis-

tance in providing technical expertise and repair parts support resulted in a substantial cost avoidance and had a positive impact on fleet readiness.

Recovery Operations

In Kosovo, Bravo Company was responsible for clearing the main supply routes and providing back-up recovery support throughout its area of responsibility. Bravo Company accomplished this mission with four M984 tactical, 8-by-8 heavy expanded mobility wreckers, and one M88 medium recovery vehicle at Camp Bondsteel and two M984s at Camp Montieth. Recovery taskings flowed through Task Force Falcon to the FSB operations center, where the S2/3 conducted a mission analysis and passed the tasking to Bravo Company. Following an in-depth intelligence update briefing from the S2/3, the tasked recovery team was dispatched.

Wreckers were dispatched from either Camp Bondsteel or Camp Montieth, depending on which camp was closer to the site of the recovery mission. A wrecker and crew were always on standby and were expected to move out not later than 30 minutes after the battalion was notified of a recovery mission requirement. Each recovery operation required a supporting gun truck as an escort vehicle.

Operation Junkyard Dog

Midway through the deployment, the maintenance company was tasked to process a "mountain" of scrap metal. The byproducts of three KFOR rotations had been stored at one end of Camp Bondsteel and easily could

have filled a 100-by-50-by-8-yard area. It took 10 soldiers working in concert with a forklift operator and truck driver from the supply and transport company 6 weeks to identify, tag, and dispose of repair parts and scrap metal through the supply support activity or a local contractor. The scrap metal they processed exceeded 500 tons and yielded \$481,000 worth of recovered repair parts.

Patrol Support

Soldiers from the maintenance company had the opportunity to participate in urban patrols and checkpoint operations with the 1-36th Infantry Battalion based at Camp Montieth. Volunteers went out into the sector or manned checkpoints with 1-36th soldiers so they could experience the same things the infantry soldiers encountered. Each weeklong patrol was planned carefully, and our soldiers received pre-patrol training that included rules of engagement and actions to take when confronted with several scenarios. The patrols were a success and cemented our relationship with the supported units.

British Soldier Sponsorship

Personnel from several other countries came into Camp Bondsteel daily, and this provided yet another opportunity for our company to broaden its knowledge base. We coordinated with the British Equipment Support Squadron and the Commando Logistic Regiment

located outside of Pristina to establish a British Soldier Sponsorship Program. Each week, two to five British soldiers came to Camp Bondsteel and joined the company for a week. Soldiers representing various military occupational specialties were linked with their American counterparts so they could exchange knowledge about their respective organizations. In addition, our unit traveled to the British base camp to participate in their "Tradesman's Challenge." This event included a sports competition, a tradesman's test, and an endurance exercise. The event was somewhat lopsided in that we did well at our American sports of basketball and volleyball while the Brits did well in the tradesman's test and endurance exercise. The Tradesman's Challenge was the capstone event in our exchange program and enhanced our friendship with the British logisticians.

Kosovo Protection Corps Maintenance Training

Bravo Company formed a partnership with soldiers from 106th Logistics Battalion, which is part of the Kosovo Protection Corps (referred to as the "TMK," which stands for the Albanian term, "Trupate Mbrojtjes Se Kosoves"). The purpose of the partnership was to give the TMK soldiers a better understanding of how the U.S. Army's echelons of maintenance work. Over a 4-week period, several TMK soldiers spent approximately 4 hours a week learning the different echelons of maintenance within the U.S. Army and the functions and



□ A Bravo Company soldier, with the assistance of an interpreter, provides instruction to TMK personnel.



□ An American soldier hands out shoes during a school visit in Gorance, Kosovo.

capabilities of a direct support maintenance company. This partnership built a better understanding of the U.S. Army's maintenance program for the TMK soldiers and encouraged interaction between Bravo Company and TMK soldiers.

Medical and Dental Support

The maintenance company was tasked to provide a two- to six-soldier security detail with crew-served weapons to accompany the 501st FSB's C Company on its weekly medical and dental civil action program (MEDCAP and DENCAP) visits to the surrounding towns. The company assisted a total of 53 MEDCAPs and DENCAPs during its deployment. The tradeoff for the maintenance company was the opportunity for our soldiers to see some of the surrounding towns and to interact with the local people.

Toward the end of the deployment, the maintenance company used these visits as an opportunity to distribute some of the 4,500 pairs of shoes sent by volunteers in the United States. The humanitarian support provided during these visits reinforced for our soldiers the purposes of the 6-month deployment while enabling us to portray the American soldier as a humanitarian to the local Kosovar Albanian and Serb populations.

Bravo Company had to assume a much greater mission responsibility while deployed to Kosovo. Whether

it was supporting the supply and transport company's LOGPAC and Prisitina fuel missions or the medical company's MEDCAPs and DENCAPs, patrolling with the 1-36th Infantry Battalion, reducing scrap metal piles, training with Brown & Root, handing out shoes during school sponsorship visits, or standing guard at night, the company met its expanded role and responsibilities in Kosovo time and time again. We learned during this deployment that flexibility and anticipation are critical to a maintenance company's success during peacekeeping operations such as Operation Joint Guardian.

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Creating a Military Supply Chain Management Model

by Dr. Kristine Lee Leiphart

Military logistics and commercial logistics are parts of the same industry. Both are concerned with focused logistics, precision and velocity, coordinated delivery schedules, fast and flexible distribution, and good infrastructure and equipment at distribution centers. In realizing the Department of Defense's (DOD's) Joint Vision 2010, key distribution measures may be needed that extend beyond what the military services, or the entire public sector, can achieve. The military supply chain management system should look at the experience and expertise of the private sector.

When the Deputy Under Secretary of Defense for Logistics, Roger Kallock, was interviewed by the journal *Transportation and Distribution* in 1999, he stated that his vision was to deliver any cargo, anytime and anywhere, in 5 days or less. He stressed three key requirements for achieving this goal: information-driven logistics, a fully integrated system, and customer-focused logistics. These also are of utmost importance to logisticians in industry. By 2005, the Department of Defense has a goal of 100 percent asset visibility, which means the military will need fully integrated cargo tracking and information systems.

Integrating the military's logistics experience with private-sector logistics expertise can help meet the challenges set forth for 2005. The Joint Vision for military logistics calls for a military supply chain management model, in which readiness means realizing optimal procurement, supply, maintenance, and distribution times. Military supply chain management integrates the business practices used in the commercial sector with the strengths of military readiness and global visibility.

Military and Commercial Parallels

Military and commercial readiness can be defined as the optimization of available resources to operate in a possible unforeseen event. In this sense, readiness can be viewed as situational management of an event. Time, cost, and quality are still crucial to measuring situational logistics management. A thorough assessment of supplies, resources, and manpower would need to be matched with the needs of the unforeseen event under surge circumstances.

Customer wait time measures the time needed to deliver an item to the customer's door, including the time

a component may spend in maintenance. Door-to-door delivery times can be measured for other situational logistics scenarios. Take, for instance, the hypothetical release of a biological weapon such as Anthrax in the subways of New York City, or the crash of a busload of tourists on a congested Los Angeles freeway that results in critical injuries. These scenarios are not very different from a wartime surge scenario requiring logistics management. Whether it is for a military or commercial surge scenario, carefully planned situational logistics and effective supply chain management can get the supplies to the people in need in an emergency. Both of these hypothetical scenarios involve fundamental logistics processes, such as quickly exchanging information, identifying available supply resources, and delivering supplies. Such scenarios call for an integrated plan involving military, governmental, and commercial services.

Military Supply Chain Management Model

Operations Desert Shield and Joint Endeavor allowed the military to show the Nation a new logistics challenge for conducting surge operations. Whether for deployment or other emergency situations such as natural disasters, the Nation has to be equipped with the best readiness resources. To do so requires the achievement of the following common national goals.

Standardization of commercial and military logistics metrics and equipment. Establishing standardized procedures and data that are either adaptable or resistant to further technological change is a necessary step for military supply chain management. When military cargo is to be handled by commercial and military logistics providers, common data and equipment for tracking intransit cargo visibility become necessary for packing, identifying, shipping, and tracking shipments to the customer's door.

Real-time stockage information. It is important to have the most current supply status. Status information is needed to improve the military's maintenance readiness and to integrate information about procurement actions and required repair parts, so there is no need to rely on equipment carcasses for spare parts.

Minimal customer wait time. Achieving optimal procurement, supply, maintenance, and distribution times

is fundamental to creating an efficient supply chain management system. Just-in-time deliveries and lean manufacturing strategies have become popular with private industry because components can be costly and the value of finished products can drop overnight. High-tech manufacturers have made it possible for companies to operate with little or no inventory. Internet auction portal sites have offered help in tracking down required parts. However, the long-term success of these portals is uncertain because they cater mainly to larger companies. In industry, the safety stock level commonly is set at twice the standard deviation of the demand, given a certain lead time. With million-dollar component parts and lack of carcasses to replenish the inventory, stocking the inventory at twice the standard deviation may not be a realistic goal for the military.

For repair and maintenance operations, it is not realistic to rely solely on maintenance operations overseas. There are not enough carcasses to replace component parts in warehouses outside the continental United States (OCONUS). The price of military components is so high that forward stocking all the possible parts needed would not be realistic either. What may benefit the military is the use of technology to signal when supplies from authorized stockage lists reach a low point so that flights can deliver the parts reliably to forward support activities. Surge channels must be set up to take advantage of factories at CONUS locations or intermediate staging bases.

In transportation and distribution, private industry operates on scheduled deliveries, because having shipments arriving according to a schedule permits maintenance of lower inventories. For surface deliveries, giving trucking companies more lead time by forwarding the shipping schedules from the suppliers eases their work load. For air cargo deliveries, the military may consider forward stocking heavy, voluminous cargo during the months of January and February and pre-positioning them in warehouses to cut annual transportation costs for sustainable operations; this is because January and February are months of low air cargo volume, and small package carriers frequently can offer lower rates during those 2 months.

The Automated Manifest System can help speed the last leg of delivery to the customer's door. That final leg of the supply chain system has been the most difficult bottleneck to resolve because customers do not operate on a definite time system for receiving cargo. Reliability—a guaranteed level of service—is still key for customers in the logistics industry.

Combining Military and Commercial Strengths

As the national infrastructure networks and ports become stressed by capacity constraints, logistics compa-

nies are relying more on intelligent distribution methods such as the Internet. Virtual service providers allow large corporations to exchange supply information among globally situated retail locations. Since economy of scale is the driving force in commercial industries, the larger the conglomerate, the better the business. When businesses are located all over the globe and information acts as another mode of transportation in logistics, technology becomes increasingly important for daily operations. Some logistics providers have become information management firms. With the adoption of the Internet for electronic commerce, customers have come to expect ready access to real-time inventory procurement, ordering, and tracking. The Information Revolution is leading the changes in supply chain distribution and fulfillment patterns.

E-commerce, e-procurement, e-retailing, and virtual warehousing concepts are changing the relationships between suppliers and distributors, altering the implications for freight movement patterns, and—since the Internet offers accessibility from any location—redefining the relative location of the workplace. Real-time access to business data on potential customers and suppliers provides managers with dynamic inventory control and immediate vehicle dispatching capabilities for freight delivery systems.

Each military installation can be conceived of as a decentralized retail center that can be connected to a centralized hub or a major distribution center that can distribute supplies. If end items are in need of repair parts, the technology is available to signal low stockage at a CONUS or OCONUS location for that particular repair part so it can be reordered instead of waiting for carcasses. Transportation delivery systems are fairly reliable and are not the major bottlenecks to getting the necessary parts to the soldier in the field. Finding the manufacturer who can make component parts to order and connecting that manufacturer with the direct support operations may be the next logical step in military logistics.

In private sector logistics, direct coordination of retailers, suppliers, and transporters using technology such as the Internet has enabled retailers to fill empty shelves more quickly because such a system helps the respective parties predict each other's needs. For the military, an Internet-based system connecting installations would require that all of the installations share information with military procurement, supply, and transportation offices. The usefulness of technology such as the Internet during wartime is debated among military logisticians. However, technology such as the Internet was created with wartime scenarios in mind, and, according to Bill Lucas of the Military Traffic Management Command, the Internet-based Global Transportation Network had

3,000 hits per day during the Kosovo air war.

Lack of spare parts is not necessarily the major hindrance to efficient military logistics. Having the spare part where it is needed is the key area for logistics improvement. During Operation Desert Storm, \$2.7 billion worth of spare parts went unused, according to a 1992 General Accounting Office report. It is estimated that, if the Army had had an effective cargo-tracking method during the Gulf War, DOD could have saved about \$2 billion. As a result of the Gulf War experience, automatic identification technology and intransit visibility systems have been established by DOD as mechanisms that will save the military money in the long term.

For military surface distribution, the idea of having coordinated, scheduled truck deliveries at installations is not very different from the type of coordination that occurs between the retailers and the supply chain management system. During the Gulf War, there also was a lack of equipment needed for deployment, and the ports of embarkation and debarkation were overcrowded with supplies that had to be processed and moved to direct support locations. Although military manpower has been reduced since then, capital investments in technology have helped expedite deployment operations (as seen in increases in the speed of loading cargo onto vessels at CONUS ports). The payback for the investments made may be realized when a faster and more accurate defense transportation system is in operation.

Future Directions

There are four areas of growth in commercial logistics that also may be relevant to military logistics in the future.

Inventory reduction. Stocks in warehouses will be kept at a minimum through continuous resource reduction, supplies kept "on wheels," inventories managed directly by vendors, component parts made to order, and distribution based on one-touch, Internet-type information exchange.

Increased reliance on technology. The paperless cargo manifest is a good example of how technology can speed cargo delivery for an interrelated supply chain. Cargo can be transported only as quickly as the accompanying bill of lading and other necessary paperwork. In that sense, electronic data interchange (EDI) offers electronic customs clearance, real-time information exchange, and more lead time for scheduled pickups of cargo. An automated system linking retailers to manufacturers can flag replenishment needs so reorders can be shipped directly from the manufacturers' distribution centers.

Strategic outsourcing. Outsourcing some services to specialized service providers may work well when there is a change in manpower, when logistics providers merge, when operations are consolidated, or when it is

desirable to tailor services to the individual needs of customers. If the military is to outsource some of its supply chain management operations, total visibility from order placement to distribution destinations will be essential.

The first step in determining what part of military logistics operations to outsource may be determined by customer demands. Customer needs should be the number one variable for creating the military supply chain management system and making asset investment decisions. After all, without the customers who create demands, there is no need for a supply chain management system. Over time, accounting for the changing needs of customers and devising a mechanism for the Federal agencies that also are logistics users to share that information will lead to the best expenditure of appropriated funds.

Joint use of public assets. As trade and transportation become more global and seamless, joint use of infrastructure and equipment—whether they belong to the military or other branches of the Government—may serve as cost-cutting measures. Some of the Nation's highways already are designated as corridors of national significance by Congress to serve national security purposes as well as everyday mobility needs. More conversions of military airbases to all-cargo airports and of naval bases to commercial use may be warranted since there is commercial demand for using the airbases and seaports.

Use of commercial rates for frequently traveled routes. Cargo deliveries that use frequently traveled routes cost less and can have shorter delivery times. An example of frequently traveled routes for the military are the routes between CONUS and Europe or Asia. States that consume the most imported products serve as natural gateways for trade. As long as a particular state is a major consumer of imported cargo, that state will always retain business at the port of entry. The logistics industry is investing in southeastern states such as Florida, Alabama, and Georgia to prepare for a forecasted increase in manufactured items imported from Latin America.

These are some ideas from commercial sector logistics that are relevant to the needs of the military supply chain management system. To achieve the goals of Joint Vision 2010, the military must look beyond the conventional practices to manage innovation and change.

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Industry and Logistics Transformation

The Army's connection with industry is power. That is how General John G. Coburn, the commanding general of the Army Materiel Command (AMC), characterized the crucial partnership role between the Army and the private sector during the second Logistics Transformation Symposium. Industry not only can provide logistics support to the Army, but it also can develop the technologies and demonstrate the business processes that the Army needs to achieve its transformation goals.

The symposium, sponsored by the Association of the United States Army in Richmond, Virginia, in May, had the theme of "Industry's Role in Logistics Transformation." It provided an opportunity for Army, Department of Defense, industry, and academic leaders to review the status of the logistics component of the Army Transformation and examine how industry can contribute to achieving the Army's transformation goals. The leaders discussed the transformation in the broad areas of enhancing deployment, reducing the logistics footprint, and reengineering for more cost-effective logistics.

Lieutenant General Charles S. Mahan, Jr., the Deputy Chief of Staff for Logistics, Department of the Army (DA), identified the key enablers for achieving the Logistics Transformation as reducing the logistics footprint, reducing logistics costs, and increasing strategic responsiveness by meeting deployment timelines. He noted that the Logistics Transformation Plan will be published this year and will be available on the Worldwide Web. General Mahan reiterated the importance of industry, stating, "Transforming The Army is a partnership," with industry acting as a vital part of the enablers. "If you [industry] do it better, tell us how we can do it better."

Lieutenant General John M. McDuffie, the Director for Logistics, J4, on the Joint Staff, observed that order fulfillment equals combat power. The Logistics Transformation requires a network-centric logistics information system (in essence, a logistics command and control system); integrated, real-time situational awareness; leveraging of technology; strategic mobility; en route infrastructure to support force projection; and integration of deployment and distribution to create one system that deploys and sustains troops.

Symposium participants previewed some possible technologies of the future, including—

- The mobile parts hospital (MPH), a deployable communications and manufacturing system that will be able to fabricate needed parts on the battlefield.
- The SmarTruck, a high-tech, James Bond-style van with numerous self-defense features.

- High-speed watercraft.
- Lighter-than-air airships capable of moving hundreds of tons of cargo using nonflammable helium rather than flammable hydrogen.

Keith Seaman of the U.S. Transportation Command discussed the Army's need to maximize throughput of materiel and reduce materiel handling. He described how assets often go from a robust infrastructure in the United States to theaters with little infrastructure. While the Army has invested much in strategic deployment, it needs to invest more in technologies that move materiel through ports and other nodes of transportation.

Lieutenant General Billy K. Solomon, commanding general of the Army Combined Arms Support Command, identified three factors as necessary to reducing the logistics footprint: reducing requirements, investing in technology, and sustaining the Army's three forces (legacy, interim, and objective) as one.

Retired General Leon E. Salomon, former AMC commander, stressed that reduced consumption is the key to a reduced logistics footprint and that reliability is the key to reduced consumption. He noted that the 2000 Army Science Board Summer Study recommended that reliability be made a key performance parameter. He also suggested that the Army should consider tracking reliability by unit rather than by individual equipment.

Major General Roy E. Beauchamp, Special Assistant to the Commanding General for Readiness at AMC, summarized the status of the Army's major reengineering initiatives: the Single Stock Fund, the National Maintenance Program, the recapitalization of legacy systems, the Global Combat Support System-Army, and the Wholesale Logistics Modernization Program. These initiatives, when fully implemented, will create integrated business and data environments across the Army and will form a suite of capabilities that create a unified Army business process.

Dr. Craig E. College, the Assistant Deputy Chief of Staff for Programs, DA, left symposium attendees with a challenge. Army resources in total, and logistics resources in particular, have been essentially flat (in constant dollars). Logistics transformation must compete with the needs of legacy systems and aging facilities for funding. Logisticians must better define critical logistics transformation enablers to compete with other transformation enablers.

ALOG

—Story by Robert D. Paulus