This chapter provides illustrative planning vignettes to assist in thinking through the key consequences, key tasks, key Army tasks, and current and needed Army capabilities, as well as key issues for Army doctrine, organization, training, leadership, materiel, and soldier systems (DOTLMS). In all, a total of nine vignettes address

- domestic preparedness, including three vignettes (high explosives, chemical, biological, and radiological or nuclear attacks);
- continuity of government;
- continuity of operations, including three vignettes (force protection, critical infrastructure protection, and continuity of headquarters operations); and
- border and coastal defense.

A more detailed analysis of Army DOTLMS for each homeland security task area is provided in Chapter Nine.

**DOMESTIC PREPAREDNESS**

**High-Explosives Event**

**Illustrative Vignette.** Attackers construct a fertilizer-diesel fuel bomb in a truck stolen from a sports arena concessionaire. On the evening of a collegiate basketball game at the sports arena, the attackers drive their truck to the 17,000-seat arena and gain access by posing as concession workers. They park the truck in one of the
access tunnels underneath the main seating, leave, and detonate the bomb.

**Key Consequences.** The bomb’s blast destroys several load-bearing pillars and causes several tiers of seating to collapse. The blast also ignites a number of small fires in adjacent concession booths, which produce acrid smoke. The lighting is affected as well, and the sections of the arena nearest the blast fall dark when the backup lighting fails. The bomb produces an abundance of rubble, and many victims of the explosion are trapped in it. The explosion, smoke, and fire causes panic throughout the arena, and the crowd surges toward the exits. Many people are injured in the stampede to safety. All told, the blast kills 250, injures 450 severely enough to require hospitalization, and injures an additional 300 who seek care on an outpatient basis. Eighty people are simply missing after the blast.

As radio reports of the bombing alert the community, doctors, nurses, and other health care providers from all shifts report voluntarily to their hospitals and clinics to assist in treating the injured. Hospitals from adjacent states call to inquire whether additional surgeons and other medical staff are needed. Passers-by begin bringing the injured to the hospital in private cars.1

**Key Tasks.** The immediate tasks are fire-fighting and evacuation. Once it is safe for rescue workers to enter the arena, search-and-rescue personnel can begin locating and aiding victims trapped in the rubble. Emergency first aid will be needed to treat the injured spectators. The seriously injured will require transportation to hospitals and more extensive medical treatment. Rubble removal is necessary to rescue some of the victims. In addition, the fire department and law enforcement will want to conduct an investigation into the cause of the blast. Security will be necessary to preserve evidence at the blast site and to prevent the curious from wandering onto the site. Eventually, clean up and repairs will be necessary to restore the arena to its original condition.

To begin work on these tasks, FEMA establishes a command post on the scene. The ATF dispatches 25 laboratory experts and technicians

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1This behavior is consistent with that at the Oklahoma City bombing of the Murrah federal building.
to the site, and the FBI ultimately provides 65 agents to investigate the bombing. The Secret Service details two explosives experts to the investigation. The U.S. Air Force sends two ambulances, a fire and rescue squad, a security police canine unit, and an 11-man engineering team to aid with excavation of the site. The nearest Army post, some 120 miles away, sends two medevac helicopters and a detail from the post’s ordnance detachment consisting of bomb technicians and bomb-detecting dogs. The post hospital sends a medical detachment including a physician, four nurses, and 20 medics to assist with emergency medical support. The Army National Guard sends a battalion of infantry to perform security duties and to assist with evacuation.

**Key Army Tasks.** The National Guard establishes a security cordon around the blast site. They work in shifts, detailing one company at a time to help with rubble removal in support of the ordnance experts and search and rescue teams. The medics and ambulance section of the headquarters company assist with patient evacuation. The medevac helicopters fly some victims to outlying hospitals to avoid overloading local facilities.

**Current and Needed Army Capabilities.** Most battalion-size units have medics organic to their headquarters companies. Depending on the individual modified table of organization and equipment of the unit, it might have four to six medics and perhaps a warrant officer physician’s assistant assigned. Combat units may have combat lifesavers among the rank and file. If circumstances required additional medical support, the DCO might call for an Army field hospital or other medical unit as appropriate. Units might detail the remainder of their personnel to search and rescue or rubble removal, as required.

**Key Issues for Army DOTLMS.** Doctrine. Many of the doctrinal needs of domestic preparedness have been identified by TRADOC, and development is under way.

Organization. Questions remain, however, regarding organizations. Is there a need to assign specific, domestic preparedness missions to select units? Are RTFs and JTFs likely to remain the optimal means for responding to an event? Is there any value in involving non-governmental organizations (NGOs) beyond the American Red Cross.
and private volunteer organizations in consequence management (they play often critical roles overseas)?

Training. Where training is concerned, should training for some units address specifically domestic events? If so, what size event? Is there potential value in specialty courses for medical, engineer, or other personnel aimed at specific consequence management tasks?

Leadership. Does institutional leadership training prepare commissioned and noncommissioned leaders appropriately for the challenges that confront them in a domestic preparedness event? Are there incentives to provide these leaders with specific domestic preparedness instruction, either in resident professional military education or via distance learning?

Materiel. Are organic equipment and expendables appropriate to the domestic preparedness support mission? Are stock levels and storage sites appropriate, given a unit’s potential taskings? Are medical supplies, for example, also appropriate for the treatment of children? Should specialty stocks be considered for issue to units likely to undertake a domestic preparedness task?

Soldier systems. Are soldiers properly prepared and indoctrinated for likely missions? Are the dimensions to a domestic response different enough from combat operations to justify special preparation and training? Does a code of conduct for domestic preparedness have potential value?

Chemical Attack

Illustrative Vignette. A domestic millenarian group plans to attack an enclosed sports arena with sarin, choosing sarin because of its inherent volatility and tendency to vaporize at room temperature. After bribing several security guards, the attackers secret a number of small canisters into the arena, fasten them under seats where they would remain unnoticed by the janitorial and security staffs, and open the containers by remote control or a simple mechanical timer once the arena is full of spectators.

Key Consequences. Well distributed, the canisters produce symptoms throughout the crowd, causing a wave of panic to sweep through the arena. Running and movement within the crowd helps
disseminate the sarin vapors, prompting more casualties. The stam-
pede resulting from the panic kills and injures as many people as fall
victim to the sarin. Sarin poisoning claims 2,500 lives. Another 400
require hospitalization for nerve gas–related injuries, and another
600 suffer injuries sustained in the panic to get out of the arena.²

The attack produces both contaminated victims and facilities.
Paramedics first to arrive on the scene and initially unaware of the
danger enter the danger zone and begin experiencing symptoms
themselves. Subsequently, other rescue workers await hazmat teams
to help ascertain what the toxic material is. In the meantime, more
people fall victim to the sarin.

As news of the attack spreads, medical personnel volunteer to return
to their hospitals and treatment facilities. Once local hospitals dis-
cover how many of the victims require assistance breathing, they
issue a call for ventilator pumps and Mark 1 antidote injectors to
hospitals from adjacent areas. Federal Express, the commercial par-
cel carrier, volunteers its services to move 350 ventilator pumps from
180 different hospitals to the stricken town.

**Key Tasks.** Among the first tasks confronting officials would be to
establish what was causing the symptoms. Once they discovered
that it was a chemical agent, the next tasks would involve controlling
access to the arena to prevent further injuries, conducting an NBC
survey to establish the exact type and extent of the contamination,
and rescuing and treating the victims. Rescue and treatment would
further require emergency crews to don protective equipment, a
patient decontamination process to assure the safety of medical per-
sonnel attempting treatment, and provision of appropriate medical
care. Law enforcement would need to investigate the attack and
attempt to determine who perpetrated it. Finally, the arena would
have to be decontaminated or destroyed.³

FEMA and the FBI would arrive at the scene early and establish con-
tact with local officials. The FBI would ultimately detail 30–50 agents

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²Casualty figures postulated are consistent with the FEMA scenarios explored in FEMA
(1997a).
³Destruction and disposition of the rubble as hazmat may be the only way to ensure
public safety, especially if persistent agents are used.
to the investigation. ATF laboratory experts and technicians would work with Army experts to establish the forensic trail and origins of the sarin. The Air National Guard sends four patient decontamination teams (these units, because of their arrival times, are used for technical and corpse decontamination). The Army National Guard sends an infantry battalion to provide site security and a chemical company to assist with survey, monitoring, and decontamination. The 310th Chemical Company sends a five-man team of experts to provide additional advice. The Army also dispatches a mortuary services company to the site. Finally, facility decontamination and cleanup may be required or, if the insurers of the facility are unwilling to accept the risk that future attendees might be exposed to residue, the demolition of the facility and decontamination of the site.

**Key Army Tasks.** The Army National Guard battalion establishes a perimeter around the arena. The battalion, in cooperation with the local authorities, creates a holding area, a decontamination area, and a first aid area, facilitating triage, patient decontamination, and emergency medical treatment before moving victims to local hospitals and clinics. The NBC staff officer and company-level NBC NCOs play key roles in these activities.

A key task is dealing with the contaminated remains of victims. Since sarin is a nonpersistent agent, the decontamination and removal problem is somewhat simplified. Sarin decomposes if sprayed with a water and ammonia mixture. Nevertheless, the danger remains that the sarin has not yet completely evaporated from some stairwells, under seats, or from victims’ clothing, leaving pockets of dangerous contamination. Local hazmat teams, assisted by members of the chemical company, recover the dead, and move them to a temporary morgue. The mortuary services company operates the temporary facility and coordinates with the local medical examiner.

**Current and Needed Army Capabilities.** There are 170-some NBC platoons and companies in the ARNG. By the end of FY 2000, the Army and Air National Guard and the Army and Air Force Reserve collectively will have 43 chemical-biological reconnaissance units and 127 decontamination elements trained for domestic preparedness missions (U.S. House of Representatives, 1999a). In addition, most battalion-size units have an NBC staff officer assigned, and
most company-size units have NBC NCOs. The NBC equipment at company level typically includes agent-sensitive paper and sensor/alarms. Many units maintain stocks for decontamination of their own equipment. Army NBC protective equipment is not designed, however, for sustained operations in a contaminated environment and does not meet Occupational Safety and Health Administration (OSHA) standards. Army protective equipment is intended to afford initial protection until personnel can move out of the danger zone and decontaminate. Thus, even though unit personnel may have NBC training, their equipment is not intended to support long-duration activities in a dirty environment.

**Key Issues for Army DOTLMS.** The first Army elements (WMD CSTs) on the scene are intended to respond within four hours. In four hours, most of the chemical victims will have died or received other care. Therefore, in addition to the fundamental issue of the WMD CST’s relevance, the DOTLMS issues arising specifically from a domestic preparedness event involving chemical weapons emphasize the longer-term aftermath of the attack rather than the immediate and specifically medical issues.

Doctrine. Doctrine should establish guidelines for operating on a sustained basis in a contaminated area to recover casualties and to decontaminate the area. Doctrine should determine the amount of risk that Army personnel should accept in rescuing chemical casualties or recovering the contaminated remains of chemical agent victims. Doctrine should also provide guidance on mortuary services/graves registration support to equip Army personnel to deal effectively with civilian expectations on the handling of the dead, especially under mass casualty conditions. Doctrine should guide cooperation with the local medical examiner and establish under what circumstances mass treatment, preparation, and interment of the deceased are warranted.

Current doctrine seems premised on the belief that the WMD CST will provide a rapid assessment and initial detection capability that can be used to identify the follow-on capabilities the RTF will provide. The Army should scrutinize the plausibility of this premise and the associated doctrine because in a chemical incident the WMD CST is likely to arrive too late and with too little capability to make much of a difference in the outcome. Within four hours, local haz-
mat and other first responders seem likely to have identified (e.g., by conferring with reachback capabilities, such as SBCCOM) the agent and the proper response. In attacks using nerve agents, in four hours most of the deaths already will have occurred.

Organization. The key organizational issue—after the question of the utility of the WMD CST—is whether further specialized chemical units may be desirable. If current training programs will prepare local emergency units to perform the necessary tasks in accordance with reasonable standards under the conditions likely to result from the near-term threat, the need for further Army specialty chemical units is probably minimal. If, however, current plans and training are thought not to be adequate, given the threat, perhaps the Army should consider creating stopgap units until local capabilities mature fully.4

Training. Although training programs and essential tasks for chemical preparedness are well established within the Army, training issues that involve supporting domestic preparedness incidents remain to be addressed fully. Training programs should be developed that equip individuals and units with techniques and procedures specifically for supporting rescue and wide-area cleanup operations. For example, field decontamination training pays little attention to the runoff after decontaminating equipment. Tactical units often look for streams or rivers as a water source, but runoff is toxic and must be dealt with carefully, especially at the scene of an incident.

Leadership. Leadership issues devolve from the doctrinal questions raised above. The Army should consider at what ranks its commissioned and noncommissioned leaders require training in chemical situations other than today’s battlefield cases.

Materiel. Materiel issues should address the differences between the requirements to operate in a tactical NBC environment and the requirements to support search, rescue, and recovery operations in a contaminated environment. Some important distinctions between the two cases involve the frequency and extent of exposure. Encountering battlefield attacks, Army units have alarms to alert them to the

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4See GAO (1999b) for suggestions that current capabilities are not fully mature.
danger, protective equipment to shield their personnel from it, and means to move out of the contaminated area. The Army has yet to encounter battlefield conditions where it must stay in an area contaminated by chemical agents for an extended period. The equipment the Army has may be adequate for the conditions likely on the battlefield, but it is not up to the task of protecting personnel operating in response to a domestic preparedness event. Here, soldiers face the likelihood of repeated, prolonged exposure and may have to recover contaminated corpses. The Army should consider acquisition of equipment appropriate for the task, especially for units with domestic preparedness among their contingencies.

**Biological Attack**

**Illustrative Vignette.** A foreign terrorist organization smuggles anthrax bacillus into the United States and places it in the heating, ventilating, and air conditioning (HVAC) ducting at an indoor sports arena, exposing some 17,000 in attendance at a hockey game. The game concludes without incident and the spectators return to their homes.

**Key Consequences.** Within three days, many experience flu-like symptoms and seek treatment. Six days after exposure, some 3,200 have died and another 4,250 are seriously ill. As news of the illness circulates through the population, hundreds of people begin flooding emergency rooms complaining of flu-like symptoms. Most of those seeking treatment are completely healthy and complicate the work of health care providers.

**Key Tasks.** The medical community must diagnose the illness correctly. Public health officials, law enforcement and the FBI must ascertain whether the disease results from a deliberate attack or is a natural occurrence and, in either case, whether or not longer-term epidemiological consequences are associated with the outbreak. Public health officials must also consider the possible value of immunizations for locales thought to be in danger and must plan to assist local medical examiners, whose mortuary facilities will quickly be filled. Facility cleanup also may be required.

**Key Army Tasks.** The Army can provide “reach back” to expertise in U.S. Army Medical Research Institute for Infectious Diseases
(USAMRIID). It can also make vaccines available in at least limited quantities if directed to do so. Perhaps most important in a mass casualty crisis, the Army can provide mortuary support services to help local officials operate temporary mortuaries and make appropriate disposition of the dead. Casualty tracking and reporting teams and casualty assistance personnel can assist in maintaining accurate records of the victims and notifying next of kin, respectively.

**Current and Needed Army Capabilities.** USAMRIID does leading-edge, primary research in infectious disease and epidemiology. It maintains habitual associations with other elements of the national public health infrastructure, including the Public Health Service.

Graves registration, mortuary support, and casualty tracking and reporting are all capabilities resident within the general-purpose force. Division Support Commands, Corps Support Commands, and Theater Army Area Commands all have appropriate units.

**Key Issues for Army DOTLMS.** None.

**Radiological or Nuclear Attack**

**Illustrative Vignette.** Attackers detonate a truck bomb at the loading dock of the reactor building at a major metropolitan university. The explosion was intended to attack the physics department’s nuclear research reactor and succeeds in rupturing the containment vessel, disabling the control rod mechanism, and cracking the reactor pool, which starts leaking badly. When the damaged reactor’s carbon-graphite insulation catches fire, radioactive contaminants escape into the atmosphere in the smoke. Because the university is in the heart of a major city, the attack has potential consequences for the entire downtown area, including the business and financial quarters.

**Key Consequences.** Radioactive steam and particles escape through the rubble. Some of the radioactive material is born aloft in the smoke resulting from secondary fires, spreading contamination further. Although the actual extent of the contamination and the danger it poses has yet to be assessed, the news media cover the story as if it were Chernobyl, spreading panic throughout the region. Although university officials try to head off panic, students and business people in the vicinity of the attack react as if they are in imme-
diate danger of being contaminated. Traffic jams and accidents fueled by panic make some of the surface streets impassable for emergency vehicles. Subways and surface trains are overwhelmed by the crush of people seeking to escape the stricken region.

Officials face two daunting tasks immediately: to evacuate the population downwind from the reactor and to ascertain the extent of the contamination and begin containment operations. Television and radio stations broadcast warnings to evacuate the neighborhoods directly in the path of radiological contamination.

FEMA deploys to the scene to coordinate federal efforts with local officials. The Department of Energy and Nuclear Regulatory Commission dispatches 20 experts to help estimate the extent of the contamination. Forty FBI and ATF agents rush to the area to work with local law enforcement in identifying and arresting the attackers. The President declares the county a federal disaster area. Twenty elderly residents suffer heart attacks from the news, and dozens crowd local emergency rooms with symptoms ranging from vomiting and diarrhea to shortness of breath and chest pains. Population evacuation is complicated by the need for the FBI and ATF to establish roadblocks as part of their search for the attackers.

**Key Tasks.** For officials attempting to manage the crisis, the immediate task is to contain the radiation to the damaged physics building. Emergency crews will have to work in proximity to the damaged reactor to stanch the leakage of contamination. A fleet of 100 medium- and heavy-lift helicopters from the Air National Guard and Army National Guard is assembled to assist. They first dump boron into the remains of the reactor building to smother any residual critical reactions, then fly large tarpaulins—perhaps tentage—over the damaged building to provide a base. Next they drop loads of closed-cell, fire retardant foam onto the tentage. Two local construction companies begin moving mobile cranes to the site to assist in covering the tentage with gunite. They attach concrete hoses to their cranes and pump gunite over the entire site to encase it. Aircrews and crane operators must wear protective clothing and dosimeters and carefully monitor their cumulative exposure to radiation.

In addition to containment, tracking and monitoring the spread of contamination will be essential to warn the population. Surveying
and predicting the path of contamination become key tasks, complicated by the valleys between tall buildings in the area that concentrate the winds and smoke and allow them to carry further before dissipating. Protecting the population requires immediate evacuation and relocation of 5,000 residents, with a subsequent 10,000 at risk, depending on how the radiation spreads. Some of the evacuees, those who reside in the area, will require temporary shelter, food, and clothing. Where evacuations occur, there is also a need to protect the homes and property left behind from looters.

**Key Army Tasks.** Army National Guard and active-duty Army units provide 12 CH-54, 24 CH-47, 36 UH-60, and eight UH-1 helicopters. Walter Reed Army Medical Center details two experts in radiological exposure to advise on managing flight crew exposure.

While the Air Force monitors and tracks airborne radiation with its specialized aircraft, the Army units conduct ground reconnaissance. Five National Guard NBC companies help monitor the edge of the hot zone. These units are augmented with six Fuchs NBC reconnaissance vehicles airlifted to the scene from two different Army posts. The Fuchs vehicles’ on-board sensors measure and report ground contamination.

The National Guard orders a brigade equivalent into the area to provide security, help maintain public order, and assist in evacuating contaminated neighborhoods. A battalion of infantry augments local police and highway patrol at maintaining a perimeter just outside the hot zone. A transportation battalion supplements local school district and commercial buses to provide transportation for evacuees. Three forward support battalions from the DISCOM work with the local Red Cross and emergency services to provide food, shelter, bath support, and clothing to the displaced. A psychological operations detachment helps warn those neighborhoods likely to be ordered to evacuate and instructs residents on what to bring and where to assemble. A veterinary detachment examines area pets for signs of contamination.

**Current and Needed Army Capabilities.** Divisional NBC companies could perform radiological survey and monitoring. Virtually any unit would contribute to the operation of a cordon or perimeter or assist with house-to-house warning. Psychological operations units would
supplement local broadcast media in issuing evacuation instructions. Transportation units and others with significant numbers of trucks could help with evacuation.

**Key Issues for Army DOTLMS.** Doctrine. Doctrine, tactics, techniques, and procedures already exist for many of the tasks described above. At a policy level, the question is the degree to which Army elements, especially engineers and aviation, ought to be directly involved in attempts to contain a radiological event. The answer to the policy issue would clearly have implications for subsequent DOTLMS, since a decision favoring a more limited role would require less of DOTLMS, and a decision favoring an extensive role might require more.

Organizations. Organizationally, the Army has no units designed, trained, or equipped to cap or contain a damaged reactor. The training, leadership, and materiel are not in place to carry out such a task.

**CONTINUITY OF GOVERNMENT**

**Illustrative Vignette.** Four days ago, the President held a working lunch with his cabinet. The Vice President did not attend because of a fund-raising commitment. Within 24 hours, all those in attendance complained of aching joints and fevers. In all instances, the fever rose despite medical intervention. The President and several cabinet officials ultimately succumbed, while the others fell into comas. Investigators concluded that the president and his cabinet had been victims of a biological attack of unknown origin.

**Key Consequences.** The Vice President and successor cabinet members had to reconstitute the Executive Branch of government. Security considerations led to their evacuation from Washington and movement to a secure facility elsewhere until the enemy campaign could be uncovered and defeated. Other key elements of the Executive Branch were also relocated for security reasons.

**Key Tasks.** Immediate tasks include moving elements of the Executive Branch to secure locations, providing full facilities and capabilities to support officials’ continued execution of their duties in office, and providing accommodations for officials’ family members. While essential elements of the Executive Branch relocate, other tasks
involve investigating to discover the source of the attack, the nature of the campaign in which it was conducted, and the enemy’s ultimate objectives. The attackers must be identified, located, and destroyed. If the enemy campaign threatens other elements of the government, appropriate security measures must be instituted.

**Key Army Tasks.** The Army could provide secure facilities and logistics support for the relocated Executive Branch elements. The Army could also support the Secret Service and other law enforcement agencies in providing security. It may also provide transportation and aviation support. The service’s intelligence arm would cooperate with other intelligence agencies in attempting to identify the enemy, his plans, and his objectives.

**Current and Needed Army Capabilities.** Providing COG requires secure facilities—both office space and living quarters for a substantial number of people. The Executive Branch also requires full communications support so it can conduct business with other branches of government and foreign capitals. Ground and air transportation is also essential, given the Executive Branch’s need to move around the country and send representatives abroad. The capabilities must be robust enough to sustain Executive Branch operations indefinitely.

The Army has long contributed to these capabilities, along with other agencies. The concern is not whether the Army can satisfy all of these requirements if they were levied against the service but rather how coordination with other actors that also play a role in COG can be optimized.

**Key Issues for Army DOTLMS.** The current DOTLMS generally support COG. At issue is whether the contingency plans currently in place anticipate the challenges of an enemy campaign plan aimed at decapitating the U.S. government.

**CONTINUITY OF OPERATIONS**

**Force Protection**

Although it also can include base security, in the homeland security context, Force Protection (FP) primarily focuses on ensuring the security of forces during fort-to-port deployments, i.e., providing a
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high probability that mobilization and deployment will not be disrupted by attacks.

**Illustrative Vignette.** Terrorists from the Osama bin Laden organization purchase nine Stinger missiles from an Afghan arms broker and, for assistance in training, download from the U.S. Army doctrine website both U.S. Army FM 44-18, Air Defense Artillery Employment: Stinger, and U.S. Army FM 44-18-1, Stinger Team Operations, for training with six of the Stingers.5

At the onset of a U.S. crisis response to Iraqi troop movements in Southwest Asia, the terrorists contract with South American narcotics traffickers to smuggle three Stingers into the United States via aircraft and, on receipt of the cargo, disperse to Altus AFB, Oklahoma, Pope AFB, North Carolina, and Dallas–Fort Worth. The terrorists then undertake nearly simultaneous attacks on two USAF airlifters and a commercial passenger plane and down all three aircraft.

**Key Consequences.** The aircraft crash, killing all on board. The USAF, FBI, National Transportation Safety Board (NTSB), Federal Aviation Administration, and local officials move to the crash sites, along with fire-fighters and paramedics. The FBI, and subsequently, ATF, deploy some 80–90 technicians, laboratory experts, and special agents to investigate each incident.

**Key Tasks.** The immediate tasks include fire-fighting and search and rescue. Subsequently, incident investigation and analysis and notification of next of kin must take place. Mortuary service support would be required. Once officials determine that a missile struck the aircraft, a general aviation warning would have to be passed to all other airfields—commercial and military. In addition, all “fly out” zones at and around the end of runways would have to be searched and secured before air deployments to Southwest Asia could continue.

**Key Army Tasks.** Army units could assist law enforcement with search and security of fly out zones. At least one company would be needed to search and secure each fly out zone—perhaps many more if the zone includes urban or otherwise dense terrain.Army intelli-

5The URL for Army ADTDL is http://www.adtdl.army.mil/
gence would assist in tracking the air defense missiles used in the
attacks and help to establish an estimate of the size of the enemy’s
total holdings. Army casualty notification teams would notify next of
kin for military personnel. Unit family support teams would assist
the families of Army victims.

Army casualty teams would also assist with casualty tracking and
reporting for all victims. Graves registration teams from a DISCOM
or COSCOM would support the local medical examiner. DISCOM or
similar units could provide housing for federal personnel. A trans-
portation center would be established to provide transportation
coordination and vehicles to move investigators and officials from
the crash site to their local base of operations. If the crash site is in
difficult terrain or the investigation encounters bad weather, the
Army would provide field clothing appropriate to the conditions.

**Current and Needed Army Capabilities.** Holding, controlling, and
observing ground is a core attribute of Army forces. Combat and
combat support units should be able to assist with search and secu-
rity of the fly out zones. The Army has well-established processes for
casualty notification and family support. Mortuary support services
can be found at corps and echelons above corps. Army units have a
well-established history of providing housing and other logistics
support to other officials in such circumstances.

**Key Issues for Army DOTLMS.** Doctrine. Doctrine exists to support
search and surveillance of fly out zones; the task is a basic infantry
operation. Doctrine on military support to law enforcement also
exists but should be augmented to address cases suggested in this
vignette, where military personnel may have to perform security
duties for an extended period or where specifically military surveil-
lance is essential (for example, where terrain, buildings, and other
circumstances make the use of electronic security systems and
commercial security services impractical).

Leadership. Leadership, especially for the noncommissioned leaders
who would supervise the tasks outlined above at a practical level,
should be strengthened. Low-level leaders must be properly pre-
pared to coordinate the handoff of surveillance information to law
enforcement when intruders are discovered.
Soldier systems. Likewise, soldiers must be properly indoctrinated and prepared for support to law enforcement. Every soldier must be prepared and instructed to understand the limits of his or her role in the security operation.

**Critical Infrastructure Protection**

**Illustrative Vignette.** Guessing that U.S. power projection forces are heavily dependent on computer-based systems, many of which run on commercial software, the enemy, a determined U.S. adversary with a mature information warfare program, undertakes a campaign of attacks on an unclassified system considered mission-critical for Army deployment. Overworked systems administrators respond to the detection of an intrusion by following procedures to isolate the penetration, but not before a Trojan Horse program is inserted, which steals processing cycles and grinds the infected operating systems to a halt. In addition, the inserted code leads to the corruption of load planning and other databases. As a result, planning tools indicate aircraft loads are too large or heavy when in fact they are not, slowing the deployment process.

**Key Consequences.** Military planners from Joint Staff to unit level experience difficulties. Major subelements of the Joint Operational Planning and Execution System (JOPES) run slowly, delaying deployment orders and similar instructions. Unit identity codes go missing from the databases. At the local level, units at departure airfields discover their automated load-planning tools do not operate properly. Most resort to manual planning, which requires more time and does not fill space aboard each aircraft as efficiently, which ultimately increases the airlift requirement to accomplish the deployment.

**Key Tasks.** For the Joint Staff, the immediate task is to find a reliable way to disseminate deployment orders, especially for those elements tasked to deploy independently of their parent organizations. Other elements of the Global Command and Control System must take over for the stricken planning and alert tools. Air movement planners and air movement NCOs at unit level must revert to manual planning techniques. Airlift squadrons, too, must revert to earlier, slower practices.
Key Army Tasks. Army unit deployment sequences have been disrupted because JOPES has notified some units late that they have been alerted for movement. For the ARFOR commander, this introduces a new, potentially dangerous degree of uncertainty into his deployment plans. He and his staff and his major subordinate units must revise their estimates as to when the ARFOR will have enough strength in the theater of operations to respond to the crisis. Unit commanders must now devote more time to ensuring that their personnel can deploy aboard the allotted aircraft and must compromise the rest of their predeployment troop leading and rehearsal time to do so.

Current and Needed Army Capabilities. Army units need reliable, free-standing (perhaps laptop) tools that can be used to plan unit movement and configure equipment loads. More broadly, the Global Command and Control System and JOPES should be insulated both procedurally and technically from the possibility of corruption or compromise.

Key Issues for Army DOTLMS. The nature of the problem in this vignette calls more for a contingency plan than for adjustments to DOTLMS. The Army should identify its essential computer and communications systems and perform a vulnerability assessment. For critical and vulnerable facilities and systems, the Army should devise a protective plan and a fallback plan in the event that attack is successful. Part of the protective considerations should be evaluating Army personnel with access to key systems to ensure that these people are reliable and pose no threat themselves. The Army might review its very successful nuclear surety program in this regard, with special attention to the personnel reliability program.

Continuity of Headquarters Operations

Illustrative Vignette. It is winter, and the Washington, D.C., area is experiencing periodic snowstorms. In anticipation of another snowstorm, the enemy contaminates with plutonium oxide the Pentagon’s supply of salt and sand used for clearing walkways. When the next storm occurs, the regular maintenance personnel salt and sand the sidewalks. Pentagon workers subsequently track the contamination throughout the building. The contamination spreads to indi-
individual cars and homes as workers leave at the end of the day. Some employees inadvertently inhale small amounts of plutonium oxide while others ingest contamination after handling their shoes. The conspirators announce their attack to CNN. Subsequent investigation confirms their allegations.

**Key Consequences.** Once the attack is confirmed, the consequences are profound. Although the attack forces the Army and all other resident agencies in the Pentagon to activate alternative sites to carry out their essential functions, the attack also has wider-reaching consequences. It is not only a military attack, it is also an area crisis. All facilities—automobiles, the Metro (subway and bus) system, homes, convenience stores, dry cleaners—that Pentagon employees may have visited after becoming contaminated must be screened for plutonium. Contaminated areas must be cleaned up. Everyone who entered the building after the contamination must be decontaminated and medically examined to ascertain the level of plutonium exposure they have experienced. Key personnel, therefore, may not be immediately available to man an alternative site. Other officials at other headquarters would have to perform the Headquarters, Department of the Army, role, at least on an interim basis. Moreover, reestablishing DoD functionality would be one of many competing priorities. FEMA, local governments, and other agencies could have requirements that would interfere with reestablishing headquarters’ capabilities. For example, quarantine of the Pentagon could prevent vehicles from coming and going. Those employees remaining on-site might not be allowed to leave until they were decontaminated. Safes and file cabinets containing essential records might not be immediately removable until they have been examined for contamination.

**Key Tasks.** The broadest task is area emergency response to ascertain the scope and extent of contamination, begin cleanup of contaminated areas and medical treatment for the population exposed to the plutonium. Survey and monitoring would be a massive undertaking because Pentagon employees commute to their homes in two states and the District of Columbia. Many officials routinely make day trips to other headquarters and agencies elsewhere and thus could spread the contamination widely. The Metro would have to be shut down so its cars and stations could be inspected and decontaminated. Businesses, supermarkets—every place that might have been
patronized by a contaminated person—would have to be surveyed. Buildings found to be heavily contaminated might have to be sealed off permanently or demolished and their residue treated as hazardous material.

Plutonium exposure is potentially very dangerous, requiring everyone who might have had contact with it to be examined. Because symptoms of radiation damage might not manifest themselves immediately, public health officials would have to monitor a relatively large population for the effects of plutonium.

Finding the attackers would be a high-priority task for law enforcement.

**Key Army Tasks.** The Army would face multiple responsibilities. It would have to provide additional medical personnel, NBC specialists, and units to assist with the aftermath of the attack. The job of determining the extent of the contamination would require large numbers of radiological monitors. The Army might also reinforce local hospital staffs with its medical personnel. Army units might be required to help secure contaminated facilities until they can be dealt with.

The Army would also have to provide medical assessment and care to its civilian and uniformed personnel and their families that were exposed to the plutonium. The Army might provide some of this care through its established network of hospitals and clinics. Primus and Tricare facilities would also contribute.

At the same time, the Army would have to reestablish its headquarters functions somewhere else. Other officials would have to stand in for those members of the senior leadership incapacitated by the attack or detained as part of the initial response. While reestablishing its headquarters, the Army must expect other key installations to come under attack and respond accordingly with heightened security postures.

**Key Issues for Army DOTLMS.** The Army has long practiced moving headquarters and handing off missions between headquarters and has doctrine to inform the task. Organizationally, the Army has other headquarters—Training and Doctrine Command and Forces Command, for example—that could take on the mission of Headquarters,
Department of the Army, in an emergency. The problem comes from the complexity of the circumstances represented in the vignette, which would generate competing priorities for the Army. The service would simultaneously face reestablishing its headquarters, caring for its contaminated personnel and their families, fulfilling its responsibilities to assist DoD, cooperating with emergency officials in managing the contamination in the Pentagon, and supporting the cleanup.

The training and materiel challenges are less about skills and more about the scope of the problem. Army NBC personnel are trained and equipped to monitor for radiation and other forms of contamination. But if plutonium were distributed as envisioned in the scenario, the scale of the monitoring and cleanup problem could be huge.

**BORDER AND COASTAL DEFENSE**

**Illustrative Vignette.** A credible threat is received that enemy agents will attempt to cross the Mexico-U.S. border bringing a nuclear device into the United States. They select a remote site in the desert far from towns or legal border crossings.

**Key Consequences.** The enemy agents also create a base of operations, including safe houses, communications, bank accounts, and other support systems necessary to sustain his operations in the United States. The FBI asks DoD for assistance in identifying the infiltration route into the United States and tracking those who use it.

The DOD creates JTF Border Protect. The task force includes Air National Guard, Army National Guard and active-duty Army elements. The National Guard elements provide surveillance and communications capabilities. The Air National Guard operates four AC-130 gunships equipped with low-light-level television for detailed, local area surveillance. The Army National Guard flies four OV-1D Mohawk surveillance aircraft equipped with side-looking airborne radar for deeper surveillance along the border. A corps-level signal battalion provides the communications. The Army National Guard also provides imagery support for wide-area surveillance of the frontier. A military intelligence battalion installs and monitors
unattended ground sensors in those areas where enemy agents are likely to or suspected of crossing the border as a means to alert law enforcement officials of an intrusion. The active component forces include 10 personnel for the JTF headquarters and a six-man liaison party located with the FBI.

**Key Tasks.** The first task is to conduct border surveillance and begin intelligence collection that will lead to identification and arrest of the actors involved. Law enforcement deploys its military surveillance assets in accordance with its best intelligence. The surveillance platforms provide capabilities to detect nuclear weapons at a great distance and “cue” NEST and FBI responses on the ground. Law enforcement officers then move to intercept the enemy agents.

The coordination involved between surveillance systems and law enforcement is critical. The military elements of the equation must provide real-time alerts and warnings so that the law enforcement elements can respond in a timely fashion. The coordination involved demands a robust communications suite linking the military to the civilian elements. The surveillance platforms must be able to steer the ground elements to a successful interception of the enemy.

**Key Army Tasks.** Other Army units in addition to military intelligence could support border surveillance and reconnaissance by making their organic battlefield surveillance systems (e.g., ground surveillance radar, night vision equipment) available to law enforcement efforts. Once it becomes clear that the enemy threatens military installations and operations, Army counterintelligence can assist.

**Current and Needed Army Capabilities.** There is no shortage of useful capabilities. Reconnaissance units, target acquisition batteries, and aviation units with side-looking airborne radar, among others, could offer support to law enforcement officials for border surveillance. The Army's Intelligence and Security Command could cooperate with the FBI on domestic intelligence matters.

**Key Issues for Army DOTLMS.** JTF-6 and military support to counterdrug operations have resolved some but not all of the issues associated with border surveillance. The shooting of a teenage goatherd along the Mexico-Texas border last year by a U.S. Marine has reopened the policy question of whether military personnel
should be deployed for direct observation and protection of the border.

An initiative that might prove less controversial would limit Army units to performing wartime reconnaissance, surveillance, and target acquisition missions in support of law enforcement. Such a policy, designed in part to keep the Army at arms-length from the intruders, would maximize wartime DOTLMS and require fewer other preparations.