Chapter 11

Defensive Operations

"...on 15 July 1918, the commander of the 30th Infantry, 3d Division, filed a graphic report of the unit's plight after repelling a German attempt to cross the Marne. His men, after being shelled with ... (mustard, chloropicrin and diphosgene) ... were 'absolutely worn out.' They had not had 'even a drink of water' during that time. If the men remained in their contaminated uniforms, he noted, they were certain to become gas casualties, because the mustard gas would eventually reach their flesh. It was 'absolutely impossible' to feed the regiment because the rations had been contaminated by the gas. He reported to the division that 'they are still there in the line and they will hold the line, but they ought to be relieved....' They were not."

--Leavenworth papers No. 10, Chemical Warfare in World War I: The American Experience, 1917 -1918, 1984.

This contamination forces

Defensive operations are conducted with the immediate purpose of causing an enemy attack to fail. Defensive operations may also achieve one or more of the following: gain time; concentrate forces elsewhere; wear down enemy forces as a prelude to offensive operations; and retain tactical, strategic, or political objectives.

Defensive forces prepare to counter enemy NBC, smoke, and flame use. Defending commanders prepare plans to use obscurant and flame weapons. If nuclear weapons have been released, the unit incorporates them into its defensive plan. commanders integrate NBC defense, smoke, and flame throughout the defensive battlefield, concentrating on close and rear operations. When authorized, friendly forces use deep nuclear weapons against high-value targets. These deep strikes disrupt the enemy's movement and interrupt its command and control. In areas where counterattacks are not planned, friendly forces may contaminate terrain.

This action slows the enemy advance and may separate its echelons. Forward security elements conceal their activities and portray false locations with smoke. MBA units create obstacles and barriers under the cover of smoke. These barriers include flame weapons. These units also prepare NBC hardened primary and alternate positions. Decon elements prepare sites in the MBA and rear areas. Recon elements throughout the area of operations undertake an aggressive patrolling program to protect

Contents

Characteristics of the Defense 11-1
Defense Patterns 11-1
NBC Considerations During the Defense 11-2
Planning and Preparation of Defense Operations Under NBC Conditions 11-3
Operations in Depth 11-4
Retrograde Operations 11-6
Transition to the Offense 11-6

the commander's freedom of action. Rear-area units restrict the use of possible landing zones and drop zones with flame weapons.

CHARACTERISTICS OF THE DEFENSE

The characteristics of defensive operations are prepared positions, security, disruption, mass, concentration, and flexibility.

Preparation

The defender will arrive in the battle area prior to the arrival of the enemy and will make the most thorough of preparation as times allows. Use of enemy WMD can hinder and delay the preparation of the battlefield. The available time is reduced if soldiers are forced to operate in higher levels of MOPP. The use of smoke to conceal obstacle preparations and positioning of forces can disrupt the enemy's recon effort.

Security

Since a force defends to conserve combat power for use elsewhere, or at a later time, commanders must provide protection of their force. NBC defense is integral to protecting the force. Integration of NBC recon and biological detection assets to provide early warning is critical. The use of smoke to deny the enemy information concerning the defending unit enhances security.

Disruption

The defender disrupts attacker tempo and synchronization by countering his initiative and preventing him from massing overwhelming combat power. The use of smoke to slow and separate attacking forces alter the attacker's tempo and disrupt his synchronization. The integration of flame field expedients into the overall scheme of the defense can disrupt dismounted infantry attacks.

Mass and Concentration

The defender seeks to mass overwhelming combat power where he chooses and shifts mass repeatedly in accordance with his main effort. Since concentrations of the force increases the threat of large losses from WMD, commanders use concealment and deception to hide this vulnerability from the enemy. Active protection measures, such as missile and air defenses, complement passive force protection measures (NBC defense).

Flexibility

The defender will choose where and when combat will take place. To deny the defender agility, the attacker may use persistent chemical agents to hinder defender flexibility. Reserve and striking forces can be attacked with WMD to delay and disrupt their introduction into the battle at the decisive point. Integration of NBC recon into these formations is critical to allow them to retain their freedom of maneuver. Use of smoke to conceal the positions of forces not initially engaged in the battle from enemy recon can enhance flexibility.

DEFENSE PATTERNS

There are two patterns of defensive operations — mobile and area. Mobile defense orients on the destination of the enemy force by using a combination of fire and maneuver, offense, defense, and delay to deter his attack. Area defense forces retain terrain. In an area defense friendly forces absorb the enemy into an interlocking series of positions. Here they destroy the entrapped enemy by fire. The commander's implementation of NBC defense, smoke, and flame use varies depending on the type of defense.

Mobile Defense

A defense that orients on the destruction of the enemy force by trading terrain to expose the enemy to a counterattacking mobile reserve. The minimum force possible is committed to pure defense; maximum combat power is placed in a striking force (with mobility greater than the enemy's) that catches the enemy as he is trying to overcome that part of the force dedicated to the defense.

Mobility is essential; however, NBC weapons used can cause terrain restriction (contamination, tree blowdown, or cratering) and hinder friendly mobility. Restricted mobility impedes the commander's ability to conduct a successful mobile defense.

Commanders train their units to cross or bypass contaminated terrain. Mechanized and armored forces can cross contamination rapidly but will become contaminated themselves. Forces may remain in MOPP for extended periods. An attack in this MOPP gear takes additional people and time for success. Therefore, commanders must plan to use larger forces or accept greater risk.

Battalions and brigades travel in dispersed formations under battlefield nuclear warfare, chemical, or biological conditions. These dispersed formations prevent total destruction by a single nuclear or chemical attack. However, dispersed forces offer less immediate combat power. Enemy nuclear strikes against forested or urban areas create major obstacles to friendly movement. Fallout from enemy or friendly nuclear strikes creates hazards that require special protective measures.

commanders conducting mobile defense deploy relatively small forces foward to seize the initiative. The size and speed of these forces help protect them from direct NBC attack. These forces conduct their own NBC recon. They react quickly to reduce the effects of an NBC attack and are ready to conduct immediate and operational decon. They use smoke extensively to conceal their location and intention. They place obscurant on enemy positions to blind observers, These obscurant interfere with enemy target acquisition and engagement.

The striking force required for a successful mobile defense is a primary target for enemy NBC strikes. The striking force is the large mobile reserve that conducts the counterattack during the conduct of a mobile defense. As a norm the enemy will attack probable striking force locations with conventional or chemical fires. If the enemy knows the exact location, it may use nuclear fires to destroy the force. When stationary, the striking force protects itself through dispersion and hardening of positions. When moving, it closes with the enemy rapidly and violently to reduce its vulnerability. Real and deception smoke screens provide additional protection.

Area Defense

A defense that focuses on denying the enemy access to designated terrain for a specified time, rather than on the outright destruction of the enemy. A commander may conduct an area defense by using mutually supporting positions in depth. Where ground, cannot be easily surrendered or when enemy forces are weak and disorganized, the commander may use a forward defense, which is an area defense with little depth. A perimeter defense is a type of forward defense, where a commander maintains the integrity of the perimeter by making his main effort well forward and counterattacking early.

The enemy attempts to attain victory through fire and maneuver. These fires may include chemical attacks. Enemy fire planners may use nonpersistent chemical agents along their route to support a breakthrough. Where terrain exposes the enemy flanks, enemy forces may use contamination to provide security. The enemy will normally use screening smoke and high-explosive barrages to hinder friendly observation. Dust generated by the barrage blocks thermal and radar systems. As a countermeasure friendly forces place observers to the front and the flanks, outside the smoke, to adjust fires.

Commanders organize the defense around a static framework provided by planned defensive positions. These obstacles protect friendly positions and slow the attacker. Flame weapons enhance the effects of minefield and barriers and contribute to destruction, shock effect, and/or illumination. Nuclear fires destroy enemy forces before they can enter the battle.

Battle management reduces the impact of enemy NBC attacks. Vulnerability analysis and risk analysis provide the commander with critical information to determine positioning and protective posture. In addition, the warning and reporting system ties the battle area together with a timely picture of battlefield conditions.

NBC CONSIDERATIONS

DURING THE DEFENSE

A successful defense consists of reactive and offensive elements working together. The defending force resists and contains the enemy while seeking opportunities to go on the offense. The attacker may include NBC weapons, smoke, and flame in its attempt to penetrate the defense. It tries to limit the defender's ability to react and reduce the defender's combat power.

The defender uses the principles of NBC defense — avoidance, protection, and decon — to preserve its forces. Active and passive avoidance measures enhance the defender's survivability and sustainability. Protection saves lives and allows the unit to continue its mission. Decon of personnel and equipment regains lost combat power.

The defender uses obscurant to conceal its activities and dispositions from the attacking force. It uses deceiving smoke in conjunction with other electronic and physical deception measures to mislead the attacker. Smoke supports the defender taking the offense by disrupting enemy surveillance and target acquisition means. Simultaneously, the defender uses obscurant countermeasures to counteract the effects of enemy smoke and obscurant.

The defender incorporates flame weapons into its barrier plans. Flame weapons destroy and demoralize enemy forces and illuminate the battlefield. The defender covers its positions to reduce the impact of enemy air-delivered flame bombs. It prepares for enemy use of flamethrowers in close operations.

The commander maintains flexibility and synchronization of his own forces while disrupting enemy activities. He counters any tactical advantage the enemy can achieve with NBC weapons. If the enemy uses NBC weapons to cause casualties, the defender must protect his force. If the enemy contaminates terrain, the defender must be ready to cross that contamination or find alternate routes. If the enemy uses chemical weapons to degrade the defender through the burdens of protective posture, the defender must retaliate to force the attacker into a similar posture. The successful defending force must be better prepared than its adversary to survive, fight, and win on the NBC battlefield.

PLANNING AND PREPARATION OF DEFENSE OPERATIONS UNDER NBC CONDITIONS

METT-T Considerations

The following is a discussion on METT-T considerations; preparing the defense; and deep, security, close, reserve, rear, and retrograde operations.

Planning begins when a commander receives a mission to defend or perceives a need to do so. This planning integrates NBC considerations. The commander and his operational planners are guided by the factors of METT-T.

Mission

In the defense the mission identifies the area to be defended. The makeup of this area impacts on how the NBC assets are used. If the defense covers a broad front, the enemy will use its recon and intelligence-gathering sources to locate strongpoints and weakly defended areas. Friendly commanders use obscurant to deny the enemy this information. In a defense with limited trafficability the enemy may use NBC attacks and contamination against key routes. Defenders may have to increase MOPP along these routes. Friendly commanders use recon assets to identify which routes are contaminated and which are not.

Enemy

Operational planners must know the enemy's doctrine, habits, equipment, and probable courses of action. The defending force conducts nuclear and chemical vulnerability analyses to identify the potential impact of attacks. It identifies probable enemy objectives and the weapon systems that support the attack. It establishes the probable enemy timetable. The friendly commander modifies his defense based on his estimate of enemy intent. He hardens his positions against possible NBC use. He also adjusts the MOPP level based on the need for mobility, perception of the threat, and responsiveness of his warning system. When authorized, he may use nuclear weapons to attack and delay enemy follow-on echelons.

Terrain and Weather

The defending force must exploit those aspects of the terrain that impair enemy momentum. When authorized, nuclear and chemical weapons augment conventional barriers and flame weapons to canalize or delay the enemy. The defender may use nuclear contamination to hinder the enemy's ability to mass or maneuver. The defending commander identifies key terrain. Some key terrain is so significant to the defense that its loss would prove decisive. The defending commander must fully implement NBC defensive measures to ensure that enemy NBC strikes do not force him from these positions.

Weather and visibility affect how defenders organize the ground. A position that offers visibility and good fields of fire in clear air maybe valueless in obscurant. Units must establish and rehearse movement to alternate positions. Weather has a major impact on the type and quantity of NBC munitions an enemy might use. Weather controls the length of time that terrain remains contaminated. In addition, high temperatures greatly increase degradation of combat efficiency in MOPP. Friendly commanders must assess the impact of current and predicted weather on friendly operations and vulnerabilities.

detect bio attack. Area defense forces retain terrain

Troops

Mobility and protection are factors in how well a force can defend. Armor and mechanized forces can traverse nuclear or chemical contamination rapidly. However, light forces cannot carry the shielding to cross nuclear contamination safely. They can protect against chemical contamination but are likely to sustain heat, exhaustion, dehydration, and chemical casualties when crossing an area in MOPP4. Differences in morale, training, and leadership make some units better prepared than others to operate in an NBC environment. Commanders should exploit relative strengths of units, such as skill in obscurant operations, when designing the defense. Air assault operations in a NBC environment are highly advantageous. Light forces avoid contamination by flying over or around it. NBCWRS is enhanced by air assets conducting radiological and chemical aerial ardor ground surveys. Air MEDEVAC of NBC casualties, as well as extraction of contaminated personnel, is possible through the use of helicopter assets. In this case the unit limits contamination spread through use of plastic covers or other field expedient methods.

Time Available

Strong defenses take time to organize and prepare. Hardening these defenses against NBC weapons takes additional time. To gain time the commander may order a delay by a covering force. This force may operate under the concealment of smoke to develop the situation. When nuclear weapons have been authorized, commanders may gain additional time with barriers and craters created by nuclear devices. Nuclear strikes will produce tree blowdown, fires, and rubble when directed against forests or structures.

Defensive planning emphasizes the strengths of the defending force and terrain. Where terrain permits, mechanized forces use their mobility to fight a fluid defense. These forces locate and exploit the attacker's weaknesses. NBC recon identifies clean routes for movement. Smoke conceals the maneuver elements. When the defending unit consists of light forces, they capitalize on their ability to hold ground and mass fire. Since they will remain in one area, they construct NBC hardened positions under concealment of smoke. They locate observation posts forward and to the flanks. These posts can avoid the impact of friendly or enemy obscurant. In addition, the commander integrates decon assets into the defense. He plans to accomplish decon with minimum impact on friendly operations. He reinforces natural barriers with man-made obstacles and flame weapons. Nuclear fire plans counter probable enemy threats involving massed forces.

To maintain security, prevent surprise, and retain his options for mass and maneuver, the defending commander must mask his preparations. He integrates his smoke plan with other active and passive deception measures. Extensive use of real and deception smoke screens conceals his positions and activities. Electronic, thermal, and auditory deception measures improve the effectiveness of deception screens. Recon and counterrecon allow him to see the battlefield while denying the same information to his opponent. Projected smoke is particularly effective in supporting counterrecon.

Preparing the Defense

Each element must wargame and rehearse its plans. Forces develop alternate routes and positions. Chemical units may prestock decontaminants and fog oil at forward supply points. They select and prepare alternate sites as time allows. Smoke units conduct recon to support smoke plans. Chemical recon units plan for methods to best support the defense.

Planners identify their PIR. Their early identification of enemy NBC capabilities and intentions enhances NBC defense. Indicators of NBC attacks provide early warning. Knowledge of enemy vulnerabilities supports friendly conventional and nuclear fire planning.

OPERATIONS IN DEPTH

The application of combat power — throughout the depth of the battle area — defeats the enemy rapidly with minimum friendly casualties.

Deep Operations

commanders conduct deep operations using fires or maneuver. Use of ground maneuver units in deep operations requires additional planning and coordination. These units must carry all supplies needed for the mission or depend on alternative measures such as aerial resupply. When aerial resupply is used, the commander must divert helicopters and Air Force aircraft from other critical missions. Units are also prepared to use MOPP gear for longer periods and assume additional risk if resupply is delayed. NBC defensive items, such as protective overgarments, require frequent resupply.

Close Operations

Division and corps commanders assign sectors to subordinate units for close operations. Priority of effort normally goes to the force responsible for the most critical sector. The corps commander implements his priorities by allocating resources. Among these resources are chemical units, nuclear weapons, and other combat multipliers.

Supporting unit Commanders plan for the use of these resources. These commanders establish their own priority of effort and further allocate units and munitions to their subordinate units. Some units, such as NBC recon elements, may provide general support. Others, such as decon units, normally operate in direct support. Commanders normally place smoke units in director general support.

c ommanders apply the NBC defensive principles of avoidance, protection, and decon. Before the battle, units camouflage and harden their positions. They position alarm systems. Commanders decide how much dispersion is required and what level of MOPP is appropriate. Overhead cover will provide some measure of protection against contamination and air-delivered flame weapons.

When high MOPP levels are required, leaders delegate as many duties as possible. Leaders cannot be as physically active under MOPP conditions as in a normal environment. Disorientation and frustration are common. Exhaustion, dehydration, and mental fatigue may degrade leader effectiveness. When in MOPP gear, subordinates may fail to recognize when a leader becomes a casualty. Unit SOPS that prescribe methods for identifying key personnel while in MOPP aid in preventing this from occurring.

Commanders also consider the consequences of a prolonged stay in a contaminated area. At a minimum the commander must ensure the resupply of overgarments, If available, he provides a covered location for a latrine. If possible, he should establish a clean area with NBC collective protection to support resting, eating, and drinking. The commander must establish a system to exchange empty or contaminated canteens for full ones. He implements a command drinking program since troops in MOPP gear may not recognize their own water requirements. The commander coordinates resupply for contaminated supplies and food stocks that cannot be decontaminated.

The commander also establishes the type and priority of decon. Units normally must continue their defensive mission until relieved. Operational decon may provide temporary relief from MOPP4. This relief extends the period troops can remain in the area without major loss of combat power. Thorough decon will be accomplished as soon as practical and may be accomplished in conjunction with reconstitution operations.

Friendly and enemy smoke screens exacerbate target acquisition and engagement difficulties. In addition, flamethrower or air-delivered napalm may reduce lightly constructed positions.

Security Operations

Screening forces or covering forces deploy in front of the forward edge of the battle area (FEBA). A screening force protects main battle area (MBA) units from surprise. It gains time for MBA commanders to reposition forces. Screening forces have fewer capabilities than covering forces.

A screening force normally conducts its own NBC recon. Decon is limited to basic skills and operational decon. It delays thorough decon until the unit has turned the battle over to MBA forces. Projected smoke, on-hard systems, and smoke pots help the screening force avoid decisive engagements. Smoke supports rapid disengagement when contact is forced. It conceals routes of withdrawal and screens the handover of the battle.

Covering forces delay or defeat leading enemy units. Under ideal circumstances a corps will use one or more ACRs as the covering force. However, it may use divisions or separate brigades for this purpose. The organic chemical element for these units provides smoke, decon, and NBC recon support for the covering force. This support may be augmented by corps chemical assets.

When the covering force can no longer support its forward positions, it hands over the battle to MBA forces. At this `point` the passage of lines is vulnerable to NBC weapons; this massing of forces presents a lucrative target.

Reserve Operations

The reserve preserves the commander's flexibility. Reserve forces may be squad-size or larger. They must be prepared to assume any mission. They may strike the decisive blow, block enemy penetrations, or reinforce committed forces. The reserve must be survivable and mobile.

Under chemical or biological conditions the protection offered by MOPP gear reduces combat

effectiveness. primary routes may expose troops to contamination. Under battlefield nuclear warfare conditions dispersion for survivability interferes with the capability to mass against a key position.

The commander and his staff must establish a posture that offers the greatest possible protection commensurate with mission, threat, and work load.

The reserve forces must also prepare for decon. If possible, in a nuclear- or chemical-threatened environment they remain in covered, hardened positions or inside vehicles until committed. If the terrain is contaminated, they may need to conduct a counterattack in MOPP gear. Where they are exposed to contamination, immediate and operational decon regain immediate combat power needed for their mission. Thorough decon can be accomplished at a later time.

Rear Operations

Protection of rear areas assures the defender's freedom of maneuver. To minimize vulnerability command and control and support facilities are dispersed and redundant. Typically, corps and ASCC chemical assets support rear-area missions. Rear-area forces supplement NBC recon with their organic unit monitoring and survey capability. These units report results to the controlling headquarters for rear operations. This headquarters disseminates warning reports and overlays as necessary.

Smoke missions normally outnumber assets; therefore, smoke use is prioritized. Fixed sites and other critical static targets present a significant problem. The enemy normally knows the location of these sites. Obscurant may provide the only practical protection.

Fixed sites should be designed to integrate active and passive defense features. These features include dedicated smoke generators and techniques to lower the visible and electronic signatures. Where smoke is not integrated into the design, the defending commander may need to assign smoke units for point or area coverage. For a detailed discussion of rear operations see Chapter 12 of this manual, FM 71-100, or FM 100-15.

RETROGRADE OPERATIONS

Few significant differences exist in NBC considerations between retrograde and other defensive operations. The major difference is the extensive chemical recon that supports movement to the rear. The enemy may use chemicals to canalize or restrict the movement of friendly troops. NBC protection is a high priority because of the potential for NBC attacks to disrupt and disorganize the movement. Deep operations with nuclear weapons, when authorized, impede the enemy's advance. So do barriers supported by smoke and flame.

Planning for logistics ensures uninterrupted support. CSS units displace at night or under cover of smoke. They plan for their own NBC defense. Retrograde actions consume large amounts of fuel, fog oil, and conventional munitions. If the enemy contaminates combat units or terrain, friendly forces will also require decontaminants. logistics planners need to position these items in depth. They must carefully monitor stockpiles to avoid destroying or evacuating these supplies unnecessarily. By positioning the supplies along routes of withdrawal, logistics commanders simplify support. They also reduce the enemy's ability to interfere with logistic operations.

TRANSITION TO THE OFFENSE

The defensive commander continually plans to gain the initiative and transition to the offense. His goal is to control the enemy's attack and resume the offensive at the earliest possible time.

Chemical units support this shift to the offense. Smoke units conceal preparations for counter attacks. Where the tactical situation permits, decon elements restore friendly units' combat power by conducting thorough decon. Recon units seek multiple, clean routes of approach. These units report contamination throughout the battlefield to the commander. Chemical leaders and staff officers at all levels ensure that friendly NBC defense, smoke, flame, nuclear operations, support the commander's scheme of fire **and maneuver.**