CHAPTER 6
CONDUCT OF BATTLE
(STANAG 2082, STANAG 2083, and STANAG 2104; SEASTAG 2082 and SEASTAG 2083; SOLOG 49R, SOLOG 128, and SOLOG 130)

Section I. GENERAL

6–1. Scope

This chapter presents the fundamentals of offensive and defensive operations. Operations under nuclear and nonnuclear conditions are compared, and the impact of biological and chemical operations is discussed. Paragraphs 6–7 through 6–52 deal with operations in which maneuver of combat units is not too seriously reduced by use of nuclear weapons. Paragraphs 6–53 through 6–56 present operational doctrine for an environment in which extensive use of nuclear fires drastically reduces the ability of ground forces to maneuver.

6–2. Purpose of Battle

a. Battle is fought with the ultimate purpose of defeating an enemy. It is fought by a combination of offensive and defensive actions. In their broadest sense, the terms "offense" and "defense" include the entire range of tactical operations.

b. The commander selects that combination of offensive and defensive action that will most effectively accomplish his mission. A command may conduct an offensive, even though large portions of the force are employed defensively. Conversely, the defense depends for success on the use of part of the force offensively.

Section II. COMPARISON OF NUCLEAR AND NONNUCLEAR WARFARE

6–3. General

The conduct of both nuclear and nonnuclear warfare is based on the application of combat power in accordance with the principles of war. The difference between nuclear and nonnuclear warfare arises primarily from the increased combat power provided by nuclear weapons; from a sharply increased vulnerability of troops and installations in the nuclear environment; and from the measures required to counteract this increased vulnerability, to include increased security requirements for nuclear weapons and their associated delivery and support units. In general, the difference is as reflected in the subparagraphs below.

a. Areas of Responsibility and Interest. To offset their vulnerability, forces operating in a nuclear environment must be dispersed to minimize presentation of targets remunerative to nuclear weapon attack. The extent to which units can be dispersed depends on the capabilities of each element to accomplish its mission. Determination of the extent of dispersion compatible with capability to perform the assigned mission is a command responsibility. Force dispersion requires assignment of increased areas of responsibility. To operate effectively in dispersed formations, the force must possess a reliable control system and sufficient mobility to make maximum use of the increased combat power of nuclear weapons. Increased areas of responsibility broaden areas of interest. In a nonnuclear environment, with its attendant reduction in available firepower, the vulnerabil-

ity of forces is less, the area that can be controlled is smaller, and greater concentration of forces is required. Consequently, the areas of responsibility and interest are smaller.

b. Dispersion. Because the dispersion required by a nuclear environment invites defeat in detail, dispersion of tactical units, command and control facilities, and combat service support installations must be governed by current and planned operations. Dispersion is proportional to the level of employment of nuclear weapons; therefore, limiting factors such as the following must be considered:

(1) The assigned mission.
(2) Control of subordinate units.
(3) Adequacy of combat intelligence.
(4) Responsiveness of the combat service support system.
(5) Weather and terrain.
(6) Mobility of forces.
(7) Nature and disposition of enemy forces.
(8) Density and location of the civilian population.

c. Mobility. In the nuclear environment, combat forces must be highly mobile to reduce vulnerability, facilitate control of extended areas of responsibility, provide mutual support, maintain freedom of action, and exploit the effects of nuclear fires. The increased mobility required by the nuclear environment also has application in the nonnuclear environment, although not always to the same degree. The reduced firepower of the latter environment, together with the more restricted areas of responsibility and the greater concentration of forces, may not present the frequent opportunities for deep, exploiting maneuver that characterize the nuclear environment.

d. Fire and Maneuver. Army units fight by combining fire and maneuver. This is a technique of establishing a base of fire and a maneuvering force. These two distinct forces have separate missions. The mission of the base of fire is to reduce the enemy's capability to interfere with the movement of the maneuver force and, within its capabilities, to destroy the enemy. The base of fire may consist of small arms, mortars, artillery, armed helicopters, tactical air, and naval gunfire. Tanks may be used in the base of fire when terrain prevents their employment in the maneuvering force. The mission of the maneuvering force is to close with and destroy the enemy. This force consists of infantry and armor, as available. In either nuclear or nonnuclear environment, fire and maneuver must receive equal consideration by the commander in determining the appropriate combat power to be applied. As the frequency of employment and the yields selected become greater, the effects of nuclear weapons begin to saturate the battle area, and maneuver elements find it increasingly difficult to maneuver decisively without prohibitive losses. However, success accrues to the combatant who can maneuver first with a force capable of exploiting the firepower employed.

e. Tempo of Operations. The combination of nuclear firepower and increased mobility significantly accelerates the tempo of operations in the nuclear environment. Engagement of forces is of shorter duration and is characterized by extreme violence. Deep, decisive objectives are sought, causing the battle to be waged in great depth. In nonnuclear warfare, the tempo is more deliberate; engagements that may be decided in a matter of hours in the nuclear environment may require several days.

f. Air Defense. The destructive power that is inherent in a single hostile aircraft or missile armed with nuclear weapons increases air defense requirements under conditions of nuclear warfare.

g. Organization for Combat. Dispersion, mobility, vulnerability, and tempo of operations affect the organization for combat. In the nonnuclear environment, greater centralization of control is practicable, particularly the control of fires, combat support, and combat service support. The commander can exert greater personal direction of the course of battle, giving more deliberate and detailed instructions to his subordinates, both before and during operations. In a nuclear environment, the opposite is true. Combat forces tend to operate semi-independently under mission-type orders. Direct support artillery units may be attached to the combat elements when distances and deployments dictate decentralization of control. The control of combat support and combat service

support units is similarly decentralized to a significant degree. With longer lines of communications dictated by increased dispersion factors, the vulnerability of those lines of communications to attack and interruption requires even greater integration of tactical and combat service support planning. Although modern communications systems permit the interchange of essential orders and information, the commander must place greater reliance on the initiative, integrity, courage, and professional ability of his subordinate commanders. The trend is toward decentralization, but the commander must be able to extend sufficient direction to the course of battle to provide guidance and prevent the force from becoming disorganized.

h. Radiation Effects and Combat Efficiency. Commanders of units operating in a nuclear environment must consider the effects of radiation on the combat efficiency of their units and their ability to accomplish an assigned mission. Detailed guidance to meet a widely varying range of radiation exposure is available in FM 3-12 to assist commanders in estimating the probable effects given levels of exposure will have on a unit's combat efficiency. However, commanders require a guide that meets their needs for interpreting available data. The following may be used as a guide:

(1) Provided that no appreciable dose (75 rad or less) has previously been received, 5 rad or less in 24 hours is a low dose (negligible risk) and is acceptable during routine operations. However, more than 5 rad per day, or 75 rad in a 30-day period, should be considered unacceptable. Moderate and emergency risk criteria are discussed in FM 3-12.

(2) If a unit receives a cumulative dose of 75 to 150 rad, the commander should regard this unit as having received a dose that is not dangerous but is approaching the threshold for the onset of combat ineffectiveness, especially if the unit receives this dose within a short period (minutes to a few hours). If the combat situation permits, a unit in this category should be exposed less frequently and to a lesser risk than a unit that has not been exposed or that has received a cumulative dose of less than 75 rad. All further exposures in this range are considered moderate and emergency risks.

(3) If a unit receives a cumulative dose of more than 150 rad, the commander should regard this unit as potentially ineffective, and exposure to additional radiation will probably result in a progressive increase in unit ineffectiveness and in probability of death for some of the personnel. If the combat situation permits, such a unit should not be exposed to additional radiation for at least 2 months to permit ample observation of actual state of health by the surgeon and reclassification of units to a less serious radiation status category.

i. Casualties. In operations where nuclear weapons are employed, commanders and staffs at all echelons must anticipate sudden, severe, personnel losses within very short periods of time. These losses may be to an extent that causes the combat effectiveness of both enemy and friendly forces to be destroyed temporarily. Thus, Army forces must be trained and indoctrinated in rapid reorganization and in the emergency treatment of mass casualties with minimal professional medical assistance.

j. Nuclear Strike Warnings. Employment of nuclear weapons in support of ground forces involves possible risk to friendly forces. In planning a nuclear strike, the commander must consider the requirement to provide appropriate prestrike warning to all friendly forces who may be affected by the strike. The responsibility for dissemination of nuclear strike warning (STRIKWARN) messages rests with the commander executing the strike. Commanders authorized to release nuclear strikes will insure that strikes affecting the safety of adjacent or other commands are coordinated with these commands in time to permit dissemination of warnings and the taking of protective measures. Warning of an impending strike will be initiated no earlier than is necessary to complete the warning. Details and approved format for STRIKWARN messages are contained in FM 101-31-1.

k. Denial of Nuclear Weapons.

(1) In nuclear warfare, preventing the enemy from capturing friendly nuclear weapons is vitally important. Equally important is preventing the enemy from using these weap-

ons if he should capture them. Denial of nuclear weapons to the enemy will be governed by the following doctrine:

(*a*) The primary means of denial is the maintenance of adequate weapon security.

(*b*) The primary objective of denial is to make the weapons tactically useless to the enemy.

(*c*) The most desirable form of denial of a threatened weapon is the physical removal of the weapon from the area of the threat; i.e., local repositioning or evacuation.

(*d*) In an emergency when no form of nuclear weapon relocation is possible or advisable, and gainful and expeditious employment of the weapon against the enemy is impossible, destructive denial becomes necessary.

(*e*) Nuclear weapons are of sufficient importance, sensitivity, and scarcity to dictate that the standing operating procedures for their denial become the personal concern of the commander. His decision is required on procedures in each area under varying circumstances of operation. These procedures should cover all details necessary for the executing individual, to include—

1. Origin of the decision to carry out emergency denial.

2. Step-by-step procedures, including differences in procedures that may be required in movement, in firing position, in a position of readiness, or at a storage site.

3. Instructions for the location of necessary denial equipment to insure ready accessibility under all circumstances of storage, movement, in a position of readiness, and in firing configuration.

(2) For details on denial of nuclear weapons, see FM 6-20-1.

6-4. Scales of Use of Nuclear Weapons

To provide a framework for subsequent discussion on the conduct of battle, the phrases "restricted scale of use of nuclear weapons" and "unrestricted scale of use of nuclear weapons" are used. These terms are necessarily relative, because there is no sharp differentiation between them.

a. The phrase "restricted scale of use of nuclear weapons" is used to denote a range of operational environments wherein the employment of nuclear weapons, in both quantity and yield, is selective and wherein the effects therefrom do not reach a level that will materially reduce the ability of combat units to maneuver effectively.

b. The phrase "unrestricted scale of use of nuclear weapons" is used to depict a level of employment of nuclear weapons that is sufficiently high to degrade appreciably the effectiveness of maneuver by combat units.

6-5. Biological and Chemical Operations

The decision to use biologicacal and toxic chemical agents rests with the President. The principles, policies, and concepts applicable to the employment of biological and chemical agents are continued in FM 101-40.

6-6. Biological and Chemical Munitions

a. The capabilities of biological and chemical munitions and the tactics and techniques of their employment are covered in FM 3-10, FM 3-10A, and FM 3-10B.

b. Biological and chemical munitions may be employed effectively in either the nuclear or nonnuclear environment. They are an additional means available to the commander to accomplish his mission. Biological and chemical agents are capable of producing large numbers of casualties. Dispersion to meet nuclear threats has limited value in countering a large area biological and chemical attack. Although some agents have a contaminating effect on the materiel for considerable periods of time, biological and chemical agents do not destroy physical facilities or materiel.

(1) Biological weapons are characterized by delayed casualty effects. They may be used profitably in tactical operations where plans can be phased to exploit their delayed effects; e.g., in advance of airborne, airmobile, and amphibious operations and in retrograde operations. Because of their potential for large area coverage, biological weapons may also be extremely effective against strategic targets.

(2) Chemical munitions have considerable applicability to tactical operations. After release of control, commanders have maximum flexibility in employing chemical agents. Vary-

ing casualty effects can be achieved by the employment of lethal or incapacitating agents. Unmasked target personnel or those with known poor biological and chemical discipline are particularly susceptible to an attack with agents employed for respiratory effects. Against masked targets or those with excellent biological and chemical discipline, agents designed for skin penetration are more suitable. Lethal agents are appropriate when relatively high death rates are desired. Incapacitating agents are appropriate when the use of lethal agents is not desirable; e.g., when enemy troops are intermixed with the civilian population. The use of these agents may permit the securing of physical facilities intact without the widespread destruction that results from nuclear and high-explosive fires.

(3) These munitions may be of particular applicability in the nuclear environment when it is desired to inflict mass casualties without the creation of obstacles produced by nuclear weapon blast effects or by radiological contamination. Chemical agents, in a contaminating role, may be effectively employed in denial and barrier operations and against targets that are to be bypassed.

c. Biological and chemical munitions have the greatest effect when their employment is coordinated with the scheme of maneuver; other fires; and special operational plans, such as barrier plans. Such employment fosters the full exploitation of the combined effects of fire and maneuver.

d. The commander's decision for employment of biological and chemical munitions requires consideration of the following factors in the planning process:

(1) Local weather conditions, particularly wind speed, direction, and air stability have considerable bearing on the decision to employ these munitions.

(2) Troops must be prepared to react promptly in exploiting the effects of these munitions.

(3) Special intelligence efforts, individual and unit protective measures, and thorough training are required to reduce the effectiveness of enemy biological and chemical attack.

(4) When protective clothing and equipment must be worn by troops for long periods of time, their combat effectiveness is lowered. The criteria for wearing individual items of protective clothing and equipment are outlined in FM 21–40.

(5) Air mobility becomes increasingly important as a means of crossing contaminated areas.

(6) Harassing chemical fires can produce a significant reduction in the combat effectiveness of enemy troops. Conversely, an excessive or inappropriate use of these fires tends to improve the biological and chemical discipline of the target personnel.

Section III. OFFENSIVE OPERATIONS

6–7. General

Since the initiative is a condition in which a commander retains the capability to apply his resources to influence the battle, offensive operations are preferred to defensive operations because the initiative lies with the attacker. The commander possessing the initiative is able to take actions that restrict his opponent to countering actions. Commanders should seek every opportunity to gain the initiative. Bold and aggressive employment of combat power, the achievement of surprise, or the exploitation of enemy errors or weaknesses serve to gain the initiative. Once gained, every effort must be expended to retain it. Continuous application of force and psychological operations against those parts of enemy units least capable of withstanding attack, the neutralization or destruction of the enemy's means of influencing the situation, and the prompt exploitation of successful actions serve to retain the initiative. The initiative is retained by commanders who conduct actions rapidly and decisively and who have alternate plans ready for implementation. Offensive operations are undertaken to carry the battle to the enemy. The purpose of offensive operations is to accomplish one or more of the following:

a. Develop the situation.

b. Defeat enemy forces.

c. Secure territory or terrain.

d. Deprive the enemy of required resources.

e. Divert the enemy's attention from other areas.

6–8. Considerations Affecting Offensive Operations

a. The commander visualizes offensive operations in terms of time and space. His estimate of the situation indicates the particular combination of factors offering the highest assurance of success. This analysis also includes an evaluation of the pertinent elements of combat power.

b. In offensive operations, the most decisive results are achieved by strong, mobile, exploiting forces. Offensive missions frequently have terrain objectives, although an enemy force may be designated as an objective. To reach an objective, a force goes through, over, or around the enemy.

c. A nuclear environment favors the use of small, highly mobile combat forces moving on the ground, through the air, or both. These forces make every effort to maintain their forward movement. Enemy forces are destroyed by fire; bypassed; contained; or, where necessary, reduced by assault. The plan of attack is designed either to divide the enemy force and defeat it in detail or to concentrate it to the extent that it can be destroyed by nuclear weapons. If it becomes necessary for the commander to concentrate his force, he does so only at the decisive point, in close proximity to the enemy, and for the shortest practicable time. Under a nonnuclear environment, greater concentration of maneuver forces may be acceptable. To insure rapid execution of the attack, the commander exploits fully all means of tactical mobility.

d. In situations in which opposing maneuver forces seek a tactical advantage, the commander must react with maximum speed. These situations may develop in the movement to contact, the meeting engagement, the reconnaissance in force, and the exploitation. Other operations, such as attack of an organized or fortified position, permit a more deliberate, planned, and coordinated attack, undertaken after thorough reconnaissance, methodical evaluation of relative combat power, acquisition and development of targets, and analysis of all other factors affecting the situation. Although such attacks are frequent in nonnuclear warfare, they occur less frequently in nuclear operations.

6–9. Maneuver in the Offense

In offensive operations, attacking forces are maneuvered to gain an advantage over the enemy, to close with him, and to destroy him. The commander may orient his attack on the front or flank of the enemy. To accomplish this, there are three basic forms of maneuver in the attack: the penetration, the frontal attack, and the envelopment. A double envelopment, a turning movement, and an encirclement are variations of the envelopment.

a. Penetration. In the penetration, the main attack passes through the principal defensive position of the enemy. The purpose of the maneuver is to destroy the continuity of the enemy force, divide it, and defeat it in detail. A successful penetration requires the concentration of superior combat power at the point selected for breaching the enemy defenses. It is appropriate when strong fire support is available, when the enemy is overextended, or when his flanks are unassailable. If sufficient preponderance of combat power is available, a multiple penetration may be launched. In such cases, the attacking forces may converge on a single deep objective, or they may secure independent objectives. When it is impracticable to sustain more than one penetration, the one enjoying the greatest possibility of success is exploited. After the enemy position has been breached, additional forces are committed as necessary to widen the breach, destroy the defending forces, and exploit the initial success by securing vital objectives deep in the hostile rear.

b. The Frontal Attack. The frontal attack strikes the enemy all along his front. It is employed to overrun and destroy a weaker enemy. This form of maneuver is appropriate for corps and higher levels of command.

c. Envelopment. In an envelopment, the main or enveloping attack passes around or over the enemy's principal defensive positions to secure objectives that cut his escape routes

and subject him to destruction in position from the flank or rear. This is accomplished by striking an assailable flank and by avoiding the enemy's main strength en route to the objective. A supporting attack fixes the enemy to prevent his escape and reduce his capability of reacting against the main effort by forcing him to fight in two directions simultaneously. In some situations, the supporting attack also deceives the enemy concerning the location or existence of the main attack. The envelopment is facilitated by superior mobility and by surprise. Aircraft are particularly valuable in increasing the mobility of the enveloping force. Aircraft provide the means for tactical parachute assault or for moving airmobile tactical forces to facilitate the rapid securing of envelopment objectives. Large-scale operations of this type may, in fact, execute the maneuver in the form of a tactical vertical envelopment. The success of an envelopment is dependent to a large extent on the ability of the supporting attack to fix the enemy. When the situation permits a choice in the type of maneuver for the main attack, the envelopment is usually preferable to the penetration because it offers a better opportunity to apply combat power to the greatest advantage.

(1) A variation of the envelopment is the double envelopment. In this maneuver, the attacker seeks to pass simultaneously around both flanks of the enemy. The attacking force must have superior combat power and mobility, and precise coordination and timing are required. Deficiency in any of these factors may subject the attacking force to defeat in detail.

(2) Another variation of the envelopment is the turning movement. In the turning movement, the attacking force seeks to pass around the enemy, avoiding his main force, to secure an objective deep in the hostile rear. The purpose of this maneuver is to force the enemy to abandon his position or divert major forces to meet the threat. He is then destroyed at a time and place of the attacker's choosing. A supporting attack may be required to fix the enemy, as in an envelopment; however, a turning movement need not always be accompanied by a supporting attack. Since the force executing the turning movement is usually out of supporting distance of other elements of the force, it must be sufficiently mobile and strong to operate independently. Air transport is particularly applicable for movement and initial support of this maneuver. Mobility superior to that of the enemy, as well as secrecy and deception, enhances the opportunity for successful accomplishment of a turning movement.

(3) A third variation of the envelopment is the encirclement. This maneuver offers the greatest possibility for fixing the enemy in position and permits his systematic capture or destruction. The encirclement is a difficult maneuver to execute because it requires the executing force to have a numerical superiority and mobility much greater than is normal. This preponderance of forces and greater mobility maximize the element of surprise in executing the encirclement. The use of airborne or airmobile forces enhances the probability of success in this type of operation. In the conduct of an encirclement, it is preferable to occupy the entire line of encirclement simultaneously; however, if this is not possible, the best escape routes are covered first.

6-10. Infiltration

a. Infiltration is a technique of movement used with the other forms of maneuver. The attacking force moves as individuals or small groups through, over, or around the enemy forward defense elements to a previously designated assembly area in the enemy rear. During the movement, these individuals and small groups seek to avoid detection and engagement by the enemy. By this means, a strong force may be deployed into the enemy rear without being subjected as an entity to decisive enemy action during movement. Once assembled, the force executes its assigned mission. Infiltration is an important means of achieving surprise.

b. The dispersed pattern of a nuclear battlefield presents frequent opportunities for movement of units by infiltration. In such an environment, movement by infiltration is an important technique for reducing the vulnerability of troops to nuclear attack.

6-11. Night Combat

a. Night combat is an integral part of all op-

erations and offers an excellent opportunity for deception and surprise. During stability operations, the desirability of conducting night operations to achieve surprise and maintain pressure against insurgents must be constantly assessed. The principles of the daylight attack apply; however, maintaining direction and control require special measures. The degree of success attained by night attacks is largely dependent on the training and conditioning of troops, prior reconnaissance, simplicity of the plan, effective control measures, and the enemy's night surveillance capability. Infiltration can be particularly effective in night operations. The objectives for a night attack are generally limited in depth by the difficulty in maintaining control, particularly after the enemy has been alerted. Then nuclear weapons are employed, the devastating effect on enemy defenses may permit the assignment of deeper objectives.

b. Battlefield illumination and use of night vision and surveillance equipment increase the efficiency of units operating at night and facilitate the employment of supporting fires.

c. Then friendly nuclear fires are used at night, adequate warning is required to reduce the problems of dazzle and loss of night vision. These fires should be carefully coordinated with the operations of other friendly units. Integration of nuclear fires with the scheme of maneuver is mandatory. This assists in preventing the creation of obstacles to the assault elements or the alteration of terrain features selected as control measures. Quick-acting chemical agents can be used for casualty effect on targets when creation of obstacles by nuclear fires is unacceptable. Enemy use of nuclear weapons during the attack may cause dazzle or loss of night vision for friendly troops.

6–12. Planning

a. Planning an attack, like other operations, is initiated by the receipt or assumption of a mission for the force. The tasks required to accomplish the mission are developed in the estimates of the commander and his staff.

b. The mission is the governing factor in the preparation of estimates, and subsequently the operation plan or order, and in the execution of the attack. All command and staff actions must be continuously compared with the mission to insure that the details of the operation contribute to mission accomplishment. The mission may be to secure an area or to defeat an enemy force. To facilitate planning, coordination, and control, the mission is usually translated into specific terrain objectives, the securing of which will permit control of the area or facilitate destruction of the enemy force.

c. The objectives selected become the basis for determining the scheme of maneuver. They are considered in relation to the characteristics of the area, the enemy and friendly situations, relative combat power, and enemy capabilities. These factors, once analyzed, indicate the various courses of action available.

d. After the objectives have been selected, the scheme of maneuver, allocation of available forces, fires, combat support, and combat service support can be determined. The means available will seldom permit all attacking forces and the reserve to be equally weighted in combat power. Furthermore, it is usually undesirable to expend excessive combat power against main enemy strength when it can be employed elsewhere with more effectiveness and greater economy. For these reasons, it is usually desirable to designate a main attack and one or more supporting attacks. The attack anticipated to produce the most decisive result and have the greatest probability of success is designated the main attack. It is accorded first priority in the allocation of combat power. Supporting attacks, which are employed primarily to fix the enemy and reduce his capability to react against the main attack, are allocated the minimum resources required to accomplish the assigned tasks. Nuclear, biological, or chemical (NBC) preparatory fires may reduce the enemy's strength sufficiently to warrant deep, multiple, equally weighted attacks.

e. A portion of the combat power of the force is held in reserve to be employed at a decisive time and place to obtain a favorable decision. The reserve is used to exploit the success of the attack, maintain the momentum of the attack, or provide additional security. It is

one of the commander's principal means of influencing the action once the operation is underway. The strength and composition of the reserve vary with its contemplated mission, the forces available, the type of offensive operation, the form of maneuver, the terrain, possible hostile reaction, and the clarity of the situation. When the situation is relatively clear and enemy capabilities are limited, the reserve may consist of a small fraction of the force. When the situation is obscure, the reserve may consist initially of the bulk of the command, prepared for employment at any point. While the reserve should be large enough to obtain a decision when it is committed, the forces allocated to it must not unduly weaken the main attack. It must be provided adequate combat support and the necessary transportation—both air and ground—to achieve the required mobility. Once the reserve is committed, a new reserve is reconstituted with minimum delay.

f. The fire support plan provides for fires in direct support of the assault elements and in general support of the entire force. Provision is made for adequate support of the reserve when it is committed. An important consideration is the decision on whether to fire a preparation. Such a decision is based on knowledge of the enemy's dispositions, NBC protection, available ammunition, and the results expected considering the loss of surprise. When nuclear weapons are to be employed, the plan includes the general allocation of nuclear weapons and fires to subordinate units; the use of nuclear weapons in the preparation, if fired; and the numbers and types of weapons to be held in reserve. Retention of nuclear weapons in reserve gives the commander an additional, powerful means of influencing the course of the operation. Areas wherein reserve forces and weapons are likely to be employed are kept under intensified surveillance. Certain areas may be so critical to the success of the operation as to warrant allocation of specific weapons and the establishment of rapid, prearranged procedures for calling for the fires. When nuclear weapons are to be employed in the preparation, the predicted obstacles that will be created must be evaluated as they affect the movement of friendly troops.

g. Attack plans include the measures for coordination and control of the various aspects of the operations. As a minimum, objectives; and a line of departure, time of attack; or starting point, are prescribed. Additional measures may include the assignment of zones of action, boundaries, axis of advance, direction of attack, lines of departure, phase lines, and checkpoints. The guiding principle in the use of control measures is maximum freedom of action for subordinate commanders, yet the higher commander must maintain sufficient control to insure a coordinated force effort.

6–13. Execution

a. The attack is characterized by fire and maneuver, combined and controlled to create a preponderance of combat power, that culminates in a powerful and violent assault in the decisive area.

b. Once the attack is launched, flexibility and speed in the employment of combat power are paramount. The attack is characterized by a series of rapid advances and assaults by maneuver and fire until the final objective is secured. The attack is executed vigorously and all favorable developments are exploited. If the advance lags in any portion of the zone, the weight of the attack should be shifted quickly to a part that offers greater opportunity for success. The attack maintains continuous momentum and is not delayed to preserve the alignment of units or to adhere closely to the preconceived plan of attack. Momentum is maintained by—

(1) The timely employment of reserves, the airlift of combat elements, the redirection of units on intermediate objectives, and the provision of adequate combat support and combat service support, or a combination of these means. In some instances, commitment of a portion of the reserve may be sufficient to accomplish the desired task.

(2) The advance of attacking echelons as rapidly as possible to their objectives. Enemy resistance is bypassed unless it can be quickly overrun or is so strong that it interferes with accomplishment of the mission. If the commander decides to bypass enemy strongpoints, he must recognize the danger of subsequent en-

trapment as well as the effect the bypassed forces may have on succeeding phases of the operation, including the danger to following combat service support units.

(3) The timely displacement of combat support elements and the provision of plans for close-in protective fires and fires to support the continuation of the attack.

(4) The modification of combat service support plans or the implementation of contingency plans to provide the necessary support to sustain operations, to include airlift of supplies.

c. To maneuver forces most effectively and employ fires to gain his objectives, the commander must keep informed of the progress of the attack, enemy reactions, and the situation confronting subordinate units. During the attack, he may increasingly decentralize control to subordinate commanders to permit them to react more rapidly to changes in the situation. Through knowledge of the situation, and of the higher commander's concept of the operation, the subordinate commander modifies and implements the plan.

d. Between areas of enemy opposition, attacking forces move rapidly by ground and air. When enemy resistance is encountered, the commander's first consideration is to reduce this resistance by having his leading elements, supported by fire, rapidly overrun and destroy the enemy. If a more deliberate attack must be made, attacking echelons move within assaulting distance of the hostile position under the protection of supporting fires and smoke. In a short, violent, and well-coordinated attack, the assault force destroys the enemy by maneuver, fire, or a combination thereof. When nuclear weapons are employed, a deliberate attack is usually unnecessary.

e. The commander provides security without sacrificing the momentum of the attack. Plans and procedures should prescribe actions to be taken in event of an enemy counterattack. Bypassed enemy forces must be contained or kept under surveillance pending subsequent elimination. Covering forces, patrols, flank guards, echeloned reserves, and firepower protect exposed flanks and gaps between units. Protection from ground attack may frequently be required for combat support and combat service support units when areas to the rear of attacking echelons have not been cleared. Halts are kept to the minimum; they permit the enemy to reorganize and may sacrifice the momentum of the attack. Especially in nuclear warfare, the failure to exploit an advantage relentlessly may nullify the success achieved. When units must be rested and resupplied, they are replaced by fresh units or reserves to maintain the momentum of the attack. For those units authorized to halt, orders should include the time and area of the halt, missions and locations of supporting units, and command and control measures. Some units may be diverted into dispersal areas to prevent congestion during the halt. Dispersal areas are planned to provide concealment, to aid defense, to reduce vulnerability to enemy attacks, and to facilitate resumption of the attack. Units in dispersal areas take protective measures to reduce their vulnerability.

f. Minimum forces, making maximum use of supporting fires, consolidate the objectives. The remainder of the command disperses and reorganizes to continue the attack without delay. Designated combat elements maintain contact and obtain information on which the commander plans future actions. Continuation of the attack with fresh troops, a new direction of attack, or exploitation of success by the reserve may require a passage of lines. Passage of lines must be executed with great speed under nuclear conditions. Use of the wide zone, characteristic of nuclear warfare, provides gaps between friendly units that can be effectively used by the passing forces.

6–14. Meeting Engagement

A meeting engagement is a combat action that occurs when a moving force, incompletely deployed for battle, engages an enemy force (static or mobile) about which it has inadequate intelligence. The action ceases to be a meeting engagement when the enemy's situation has been developed and subsequent planned and coordinated operations are undertaken. These actions occur frequently at the lower echelons of command in both offensive and defensive operations. The principal characteristics of meet-

ing engagements are limited knowledge of the enemy and minimum time available for the commander to develop the situation and formulate and execute plans.

6–15. Movement to Contact

a. Movement to contact is a tactical operation designed to gain or reestablish contact. An additional objective of friendly forces during movement to contact is to gain an advantage over the enemy that will facilitate future operations. Maximum advantage of position at the time of contact is achieved by properly organizing the force for combat and by maneuvering the force components. The movement to contact is pushed aggressively to gain the objective before the enemy can react. Every intelligence and security agency is used so that the main force will become engaged under the most favorable conditions. Air cavalry units may be effectively employed in intelligence and security roles, to include light air and ground combat during the movement to contact. Tactical aircraft and long-range missile fires may be employed early to achieve fire superiority. The bulk of the combat power of the force should remain uncommitted to permit flexible employment upon contact with the enemy. Execution is decentralized, but sufficient control is maintained to permit effective use of long-range supporting fires.

b. The movement to contact is normally made in multiple columns. The command is normally organized into a covering force, a main body that includes the advance guard, and flank and rear security forces. Subordinate tactical groupings employ various formations as required by their individual situations and missions.

c. The composition, size, and operations of the covering force may influence the entire course of the battle. The mission assigned the covering force is to develop the enemy situation and prevent unnecessary delay of the main body. Its operations may include attacking to destroy enemy resistance, securing and holding key terrain, or containing large enemy units. The covering force is organized to accomplish its mission well forward of the main body. A highly mobile, well-balanced force is required. Close coordination between the covering force and the main body is essential. Normally, control is retained by the overall commander of the force moving to contact. However, widely dispersed operations may favor decentralizing control to column commanders.

d. The main body contains the bulk of combat power of the force. Units of the main body are organized for combat and are positioned in the advancing columns to permit maximum flexibility for employment during the movement or after contact with the enemy is established. The advance guard is used to expedite movement of the main body, to maintain contact with the covering force, and to provide security to the front of the main body.

e. Flank and rear security forces protect the main body from ground observation and surprise attack. These security forces must be strong enough to defeat minor enemy forces or to delay strong enemy attacks until the main body can deploy. Flank and rear security forces operate either under the control of the commander of the force moving to contact or under the control of subordinate elements moving in proximity to them. Close coordination with air reconnaissance, observation, and surveillance contributes to the security of the main body.

f. The movement to contact may frequently be made at night or during other periods of reduced visibility. This requires all units to be skilled in night movement. The movement to contact terminates when major enemy resistance necessitates the deployment of the main body.

6–16. Reconnaissance in Force

A reconnaissance in force is a limited-objective operation by a considerable force to discover and test the enemy's dispositions and strengths or to develop other intelligence. A reconnaissance in force is usually planned and executed as a limited-objective attack. Even when he uses it primarily to gather information, the commander executing a reconnaissance in force is alert to seize any opportunity to exploit tactical success. If the enemy situation must be developed along a broad front, a reconnaissance in force may be conducted using strong

probing actions to determine the enemy situation at selected points. The size of the force is sufficient to cause the enemy to react in a manner that discloses his location, dispositions, and strength. Since a reconnaissance in force is used when the knowledge of opposition is unknown, a combined arms force of infantry and armor, with artillery, Army aviation, and engineer support, is employed. Reconnaissance-in-force operations may result in unacceptable losses, disclose the commander's ultimate intentions, or provoke an unwanted general engagement. When the enemy possesses appropriate nuclear delivery means, the risk in presenting a profitable target may outweigh the value of the information desired. The reconnaissance in force is particularly adaptable to the fluid characteristics of the nuclear battlefield and will serve as the basis for many offensive operations.

6-17. Exploitation

a. Exploitation is the followup of gains to take full advantage of success in battle. It is the phase of offensive operations that destroys the enemy's ability to reconstitute an organized defense or to withdraw in good order in the face of a threatened disaster. The psychological effect of exploitation creates confusion and apprehension throughout the enemy command, reduces the enemy capability to react, and may be decisive.

b. Planning for exploitation should provide for rapid, continuous advance; adequate combat support and combat service support; and the selection of decisive objectives. Provision must be made for regrouping of component elements while other elements continue the advance. Army air reconnaissance and security units may be effectively employed as intelligence and security agencies throughout all phases of exploitation.

c. The missions of exploiting forces include the seizure of deep objectives to cut enemy lines of communications and the disruption of enemy command and control facilities. The mission assigned the exploiting force commander should be sufficiently broad to avoid restriction of opportunities to disrupt and destroy the enemy. The commander must realize that troops and their leaders frequently are tired at the time opportunity for exploitation occurs, and aggressive, demanding leadership is required.

d. Exploitation is usually initiated when the enemy force is having recognizable difficulty in maintaining his position. This condition is indicated by decisive gains by friendly forces; lessening of enemy resistance, particularly supporting fires; and an increase in the number of prisoners captured and equipment abandoned. Once begun, the exploitation is executed relentlessly to deny the enemy any respite from offensive pressure in the drive to the final objective.

e. Forces in the exploitation normally advance on a wide front, depending on the mobility of the force, road net, and other aspects of the terrain. Only those reserves that are necessary to insure flexibility of operation, continued momentum in the advance, and minimum-essential security are retained. Airmobile and airborne forces are used to secure objectives critical to the advance and to cut enemy lines of escape. Swift raids, thrusts, and envelopments by ground and airmobile forces delay or prevent enemy reorganization. Actions are characterized by boldness, prompt use of available firepower, and rapid and unhesitating employment of uncommitted units. The exploiting force is committed in the decisive direction.

f. The exploiting force commander must be alert to prevent the dissipation of combat power in achieving minor tactical successes or in reducing small enemy forces. The aim is to reach the objective with the maximum strength as rapidly as possible. Control is vital to prevent overextension of the exploiting force if the enemy is capable of regrouping unexpectedly to attack the command. Available fires are employed to destroy enemy forces that cannot be bypassed or contained. Security from enemy nuclear attack is enhanced by rapid advances to keep enemy forces off balance and to neutralize their intelligence and surveillance capability.

g. The effectiveness of the exploitation may be enhanced by the commitment of additional forces with a mission of following and supporting the exploiting force. These forces

widen or hold the shoulders of the penetration, secure lines of communications, and relieve elements of the exploiting force containing bypassed enemy forces. Control of the forces performing a follow-and-support mission is retained by the next higher commander. Liaison between the following and supporting unit and the exploiting unit should be accomplished. Units given a follow-and-support mission should, where possible, possess or be provided mobility equal to that of the exploiting unit.

6–18. Pursuit

a. The pursuit is designed to cut off and annihilate a hostile force attempting to escape. As enemy demoralization begins and enemy forces disintegrate under relentless pressure, an exploitation may develop into a pursuit. A pursuit may also occur in any operation in which the enemy has lost his ability to operate effectively and attempts to disengage. In a pursuit, the enemy loses his ability to influence the situation and acts in accordance with the pursuer's actions.

b. In the conduct of a pursuit, direct pressure against retreating forces is maintained relentlessly, while an enveloping or turning force cuts the enemy lines of retreat. Double envelopments of the retreating main force are executed when conditions permit. Maximum use should be made of airmobile and airborne elements in the enveloping forces.

c. Pursuit operations are conducted aggressively and under decentralized control. Commanders remain well forward to provide impetus to the operation and must take decisive action to overcome any inertia in the command. Pursuit is pushed to the utmost limits of endurance of troops and equipment during both daylight and darkness. Tactical air support will assist in inflicting damage on the retreating enemy, concentrating on his lines of withdrawal and his reserves. Continuity of combat service support is vital to the success of this type of operation.

Section IV. DEFENSIVE OPERATIONS

6–19. Purpose

a. Defensive operations employ all means and methods available to prevent, resist, or destroy an enemy attack. The purpose of a defensive operation may be to—

(1) Develop more favorable conditions for offensive action.

(2) Economize force in one area to apply decisive force elsewhere.

(3) Destroy or trap a hostile force.

(4) Reduce the enemy capacity for offensive action.

(5) Deny an enemy entry into an area.

b. In the defense the commander seeks to use the operational area and means available to his advantage and to the enemy's disadvantage.

6–20. Defensive Considerations

a. In defensive operations, the defender seeks to seize and retain a degree of initiative by selecting the area of battle, by forcing the enemy to react in conformity with the defensive plan, and by exploiting enemy weakness and error. Defensive operations may be imposed by an inability to attack. However, the commander—particularly under fluid, nuclear battlefield conditions—may deliberately undertake defensive operations in combination with deception to destroy the enemy.

b. The deliberate shift from offense to defense, or vice versa, may occur rapidly and with considerable frequency. A defensive operation usually is a composite of major and minor actions and engagements. Elements of the command may be defending, delaying, attacking, feinting, or delivering fires as part of the defense.

c. An offensive attitude is necessary to seize opportunities to destroy the enemy. Psychological preparation of troops and strong leadership in the defense are essential to maintain high morale, alertness, and an aggressive attitude. The troops must understand that an effective defense is an opportunity to destroy the enemy.

d. The conduct of defensive operations under adverse conditions is the supreme test of the

field commander. The defender must fully use those advantages that he possesses and can improvise. He must take greater risks and conserve his resources, yet commit them unhesitatingly and decisively at the proper time. He must deal with the serious problems of leading troops without the evident success of offensive combat. The highest order of leadership and tactical skill is demanded.

e. The mission and the area to be defended should be stated in terms that permit the commander to use his means to maximum advantage, with minimum restriction on specific terrain features to be held. Defensive operations, however, inherently require restrictions not present in offensive operations. These result from the need for some degree of centralized control to insure the most effective use of resources, so that an adequate reserve remains for the decisive portion of the action.

6-21. Forms of Defense

a. Mobile Defense. The mobile defense is that defense in which minimum forces are deployed forward to warn of impending attack, to canalize the attacking forces into less favorable terrain, to impede and harass them, and to cause their disorganization. The preponderance of the combat power of the defending force is employed in vigorous offensive action to destroy the enemy at a decisive time and place.

(1) In general, the forward defense area forces employ the principles of the delaying action, while the remainder of the force uses the principles of offensive combat. In nonnuclear operations, the mobile defense is applicable to highly mobile warfare and to situations in which broad frontages must be covered. This type of defense is the preferred form in the nuclear environment, because it reduces their vulnerability to nuclear attack and perserves their freedom of action. In both environments, the mobile defense may provide an opportunity to destroy the attacking force and regain the initiative. Set patterns of action are avoided. The defending commander must retain freedom of action to choose the time and place to launch his decisive counterattack. This form of defense requires that the defending force have mobility comparable or superior to that of the enemy. The utilization of airmobile forces in the mobile reserve will improve the flexibility and responsiveness of the overall force to tactical situations.

(2) Generally, successful employment of the mobile defense depends on the ability of the defending force to yield terrain to achieve decisive results through the employment of the reserve as a counterattack force. Forward defense area forces should not be overextended or exposed to defeat in detail. Forward defense area forces must possess sufficient combat power to compel the enemy to concentrate his forces for attack where they may be destroyed by firepower and maneuver. When circumstances dictate that a portion of the force conduct a mobile defense while adjacent units are conducting an area defense, the flanks of the adjacent units cannot be exposed by the forward defense area forces of the mobile defense units.

b. Area Defense. Area defense is based on retention of specific terrain.

(1) When retention of specific terrain is mandatory, the commander places primary reliance on the ability of fires and forces deployed on position to stop and repulse the attacker. The force may or may not be physically on the key terrain or its approaches before the enemy attacks, particularly under nuclear conditions. In retaining specific terrain, the commander must use sufficient forces in the forward defense area to create the necessary combat power on or to dominate the terrain to be defended. The forward defense area normally has a higher priority for forces than does the reserve. The reserve is employed to block and destroy the enemy, to eliminate penetrations if they occur, or to reinforce threatened areas. The defensive concept requires detailed fire plans, organization of the area to exploit the natural defensive strength of the terrain, and plans for the maneuver of the reserve.

(2) The area defense normally takes maximum advantage of existing obstacles, reduces the danger of attack at night or by infiltration, and forces the attacker to employ maximum combat power to accomplish a penetration.

c. Variations in Defensive Operations.

(1) The area defense and the mobile de-

fense are at opposite ends of a scale of wide variations in defensive operations. Frequently, neither of these basic patterns will be suitable to a given situation and mission. In such cases, a variation incorporating applicable portions of each must be devised.

(2) In a larger force conducting the defense, the operations of the various component units may encompass both defensive patterns and delaying operations, with certain units being assigned primarily an offensive role.

6–22. Maneuver in the Defense

a. Maneuver by combat elements in the defense includes the spoiling attack, the counterattack, the counteroffensive, and the delaying action. Offensive maneuver is important in all forms of defense and is particularly significant in the mobile defense. Offensive maneuver is undertaken to exploit the results of attack by NBC and other weapons, to destroy a penetrating force at a time and place of the defender's choosing, to strike the enemy when he is unprepared and thus achieve significant results, or to assist in disengaging a force. The delaying action is employed to permit units to move to other positions from which they can execute either offensive or defensive missions or to gain space for employment of nuclear weapons.

b. A spoiling attack is an offensive operation launched by a defender against enemy formations that are preparing for attack. Its purpose may be to destroy a portion of the enemy force, to throw the enemy off balance, to secure terrain from which to launch an attack, or to deny the enemy ground observation and surveillance of the defended area.

6–23. Defensive Areas and Forces

a. The defensive areas are the security area, the forward defense area, and the reserve area. Forces and fires of the command are allocated to each in accordance with the defensive plan. The general scheme of maneuver or defensive organization of these elements is prescribed in sufficient detail to permit intelligent execution of the plan.

b. Forces of the security area furnish information on the enemy, deceive him, and provide a counterreconnaissance screen. Within their capability, they delay the enemy and reduce his combat power. Under active nuclear conditions, an important additional mission is locating and developing nuclear targets. Elements of the security force may be designed to stay behind advancing enemy elements. The composition and support of the security force include long-range reconnaissance and observation means, both ground and air; strong firepower; a high degree of mobility; and excellent and secure communications.

c. The composition of forward defense area forces varies with the defensive purpose.

(1) When the defense is based on the retention of specific terrain, major forces are used to organize the ground. Because of the inability to develop an impregnable defense, a reserve is required to maintain the continuity of the defense.

(2) The forces allocated to the forward defense area in a mobile defense, while not so strong as those in an area defense, must be capable of forcing the enemy to deploy. They require long-range fire capabilities and normally a mobility equal to or greater than that of the enemy.

d. The forces of the reserve are the primary means by which the defender regains the initiative. Retention of a relatively large reserve, consistent with the requirement for forces in other defensive areas, permits offensive action both within and forward of the battle area. When the mobile defense is employed, the reserve is the strongest and most decisive element of the force. While it may be required to perform defensive actions, its primary mission is to defeat the enemy by offensive combat. The combat power allocated the reserve includes fire as well as maneuver elements. When nuclear fires are authorized, the ability of the reserve to concentrate overwhelming combat power quickly in a given area greatly increases its offensive capabilities. In addition, the reserve provides flexibility and may be used to—

(1) Reinforce units.
(2) Occupy positions.
(3) Insure retention of key terrain.
(4) Assist in disengagement of units.
(5) Replace forward units.
(6) Extend flanks.

(7) Provide security against infiltration and airborne and airmobile attack.

(8) Conduct operations against irregular forces.

6-24. Planning

a. Development of the best overall defensive plan requires consideration of—

(1) The mission.

(2) The nature of the terrain and the degree to which specific terrain must be held.

(3) Relative mobility.

(4) The depth of the defensive area.

(5) The relative combat power of opposing forces.

(6) The relative air and nuclear situations.

(7) Reserves available at higher echelons.

(8) The ability to provide combat service support for the various plans.

(9) The deployment of combat service support units and facilities supporting the force.

b. The means available to the commander in planning defensive operations include forces deployed in defensive positions, fires responsive to the commander, and units maneuvering in conformance with the defensive plan. Each of these means depends on the others for maximum effect. The defender's task is to combine these means in proper proportion to accomplish the defensive mission. Considerations are—

(1) Facilitating the use of these means by exploiting the natural defensive strength of the terrain. The natural strength of the area can be increased by the aggressive, offensive-minded use of fortifications and barriers and by the development of detailed fire and maneuver plans. Normally, the defender can select and reconnoiter the defended area before its organization and thus influence the attacker to conform to the defensive plan.

(2) Holding or controlling specific terrain as indicated by the mission. The terrain is analyzed to determine the relative criticality of avenues of approach into the defensive area, areas suitable for offensive action, and existing or potential obstacles that, if developed, will strengthen the defense.

c. Fires are planned to destroy the enemy force or to permit exploitation by maneuvering elements to complete its destruction. As the level of use of nuclear weapons increases, the relative importance of fires in defensive operations increases. Fires are planned to permit engaging the enemy force early although, in some instances, fire may be withheld to develop maximum surprise and shock. The decision to fire at long range or to withhold fires is critical and must be made by the commander in each case. Plans must be sufficiently flexible to permit this latitude. Fires are planned against all elements of enemy combat power, such as enemy fire delivery means, reserves, command and support installations, and units in contact.

d. Effective combat intelligence is critical and is normally difficult to obtain because the defender lacks the initiative and is frequently inferior in combat power and reconnaissance means. Thus, the defender must make the most effective use of the means available. His detailed knowledge of the operational area, plus the increased susceptibility to detection of the attacker on the move, permits him to concentrate his effort on likely assembly areas, critical defiles, and other areas the enemy is likely to use.

e. The counterattack is a basic element of the defense. Its function varies in accordance with the type of defense being conducted. Although there are occasions wherein the counterattack is made by fire alone, more decisive results usually accrue from a combination of fire and maneuver. The principles of offensive combat are applicable to the conduct of the counterattack. Plans for the defense include counterattack plans in those areas wherein they are most likely to be required or where the maximum opportunity to destroy enemy forces may occur.

(1) In the area defense, the function of the counterattack is to destroy or eject the penetrating force and regain control of the battle area.

(2) In the mobile defense, the counterattack is the decisive element by which the commander accomplishes his mission. The objective is to destroy the enemy force and to exploit the ensuing opportunity to regain the ini-

tiative, to include operations within the enemy's rear area.

f. The employment of biological and chemical weapons is planned for defensive operations. Use of persistent-effect chemical agents may increase the effectiveness of fires against known enemy weapon positions and enemy reserves not suitable for nuclear attack. Persistent-effect chemical agents are also used to contaminate barriers, obstacles created by demolitions, and defiles as an aid in impeding enemy movement and canalizing his advance. Nonpersistent-effect chemical agents may be employed against targets of opportunity and against concentrations of troops in the attack. Chemical minefields, including minefields in which chemical and high-explosive mines are intermixed, are included in barrier plans.

g. Barrier plans are developed concurrently with other plans. It is necessary to take maximum advantage of natural obstacles and to improve them. The effectiveness of an obstacle is extremely limited when it is not covered by observation and fire. Lanes and gaps are required for the necessary movement of reserves and other forces in the battle area. Barrier plans establish the location of barriers, responsibility for construction, and priority in completion. The barrier plan is developed concurrently with antitank and fire plans and must be carefully coordinated with counterattack plans.

6–25. Defense Against Armor

a. Effective operations against an enemy possessing a significant armor capability require antitank defenses throughout the operational area. Such defenses are planned to cover those avenues of approach presenting the greatest threat to the command.

b. Maximum use is made of natural and manmade obstacles to facilitate the destruction of enemy armor by canalizing it into the fields of fire of antitank weapons. The entire antitank weapon system is used. This includes individual antitank weapons, mines, tanks, artillery, armed aircraft, and nuclear weapons. The antitank defense is established in depth throughout the defended area. Artillery high-explosive and chemical fires may be used on tanks to destroy the weapon, to produce casualties among the crews and accompanying infantry, and to separate the infantry from the tanks to facilitate close-in infantry antitank action.

c. If the enemy armor succeeds in overrunning forward areas, antitank weapons located in depth seek to stop this advance. Forces in the forward areas must remain in position to prevent enemy infantry from accompanying its armor and to contribute to the destruction of the penetrating tanks. Reserve forces heavy in armor are then committed to destroy the penetration.

6–26. Execution

a. In the defense, a continuous, aggressive, intelligence collection effort, including the use of air and guerrillas, is essential in determining the probable strength, composition, direction, and time of the enemy attack.

b. The action of combat units on position may vary from delay to defense at all costs. Combat units employed in defensive positions accomplish their mission by destroying the enemy with fires and by impeding his advance to the extent that he can be destroyed by fire and maneuver. Combat units may disengage and shift rapidly from defensive to offensive maneuvers.

c. Unless surprise offers a greater opportunity for success, the attacking forces are taken under fire as early as possible by aircraft and long-range artillery. As the enemy advances, he is taken under fire by elements in the security area. Security forces warn; deceive; develop intelligence; and, if part of the mission, execute maximum delay without becoming decisively engaged. They inflict maximum casualties on the advancing enemy and force him to deploy. As a means of collecting target information, security elements may remain in the area after passage by the enemy.

d. The attacker's disposition forward of the defensive area may favor a spoiling attack. When considering such an attack, the commander must evaluate the risks involved in terms of their effects on accomplishment of his mission.

e. As the attacker approaches the forward

defense area, he is taken under fire by all weapons within effective range, unless fires are deliberatey withheld as a surprise measure. Previously selected target areas are kept under close surveillance. For maximum effect on fleeting targets, fires must be readily responsive to the commander.

f. In the mobile defense, the forward elements conduct essentially a delaying action. Their operations may extend over considerable depth in the battle area. These elements must, however, be prepared to stop and hold terrain on short notice to assist the success of the decisive counterattack. The mobile defense is based on the counterattack as the decisive element. Criteria for determining when the counterattack should be launched are primarily those for assessing offensive maneuver. Among the significant considerations are the degree to which the forward defense area forces have succeeded in weakening the attacker and the potential remaining for further reducing his effectiveness. It is desirable that the enemy be stopped or slowed down and that he be disorganized, but these are not requirements and should not inhibit initiative in launching the counterattack.

(1) The counterattack capability is not dissipated against minor enemy success. When the counterattack is launched, it is given the full means to accomplish the mission. Piecemeal commitment of counterattack forces jeopardizes the success of the operation. The counterattack is carried out rapidly and violently, employing as much combat power as necessary to insure success.

(2) On occasions, it may be necessary to launch separate counterattacks against two or more enemy forces. The more effective method is the elimination of enemy forces in order of the seriousness of their threat. Simultaneous counterattacks by elements of the reserve divide the available combat power and should be avoided, but such action may be required in some situations.

(3) Although counterattack plans are prepared in advance, the counterattack may be launched before or after the times planned and in an entirely different area than anticipated. The probability of successful accomplishment of the mission is the controlling factor.

(4) Local counterattacks on a small scale may be used to assist in disengaging a force or to cause the enemy to change his plans. Small-scale attacks conducted with skill and determination may have an effect on the enemy out of proportion to the actual combat power involved.

g. The area defense is conducted in recognition of the fact that the battle area has been organized to halt the enemy; or if he penetrated the forward defense area, he must be blocked and contained in areas that favor the counterattack. The counterattack is the principal means for eliminating the penetration. The time to launch it is one of the most difficult decisions required of the commander. It should be launched at the time the attacking force is most vulnerable. It may, however, be launched as a result of an inability to cause the enemy to react to the defensive plan. Following penetration of the forward defense area, there is a period during which the momentum of the attack may be slowed, the attacking force somewhat disorganized, or the attacker's combat power dissipated to the extent that he is vulnerable to attack. Considerations in selecting the time and place for the counterattack are similar to those of the mobile defense. Additional considerations peculiar to the area defense are—

(1) Dissipation of fires and reserves against minor penetrations may leave the defender without means to react against major penetrations; or

(2) If the penetration achieves such success that a counterattack would be ineffective, it may be necessary to use the reserves in a blocking role and depend on higher echelons to conduct the counterattack.

Section V. RETROGRADE OPERATIONS

6-27. General

a. A retrograde operation is any movement of a command to the rear, to the flanks, or away from the enemy. A force executes a retrograde operation voluntarily only when a distinct advantage is to be gained. In either

event, such an action must be approved by the next higher commander. To be successful, it must be executed according to well-organized plans. A disorganized retrograde operation in the face of enemy strength invites disaster.

b. Retrograde operations conducted in a nuclear environment necessitate preparation of detailed plans for the tactical employment of nuclear weapons, to include highly selective use of atomic demolition munitions. Revisions to the initial scheme of maneuver may be necessary to reduce those vulnerabilities inherent in retrograde operations. Key identifiable terrain positions may have to be avoided in consideration of enemy nuclear capability. Close contact with the enemy is maintained as long as possible. Emphasis is on mobile defensive techniques to deny relatively immobile targets to the enemy.

6–28. Types of Retrograde Actions

Retrograde actions are classified as—

a. Withdrawal—An operation by which all or part of a deployed force disengages from the enemy.

b. Delaying action—An action in which a unit trades space for time and inflicts maximum punishment on the enemy without becoming decisively involved in combat.

c. Retirement—An operation in which a force not in contact moves away from the enemy.

d. Combination of types—In a large command that is in contact with the enemy, a combination of the above types usually is necessary, either simultaneously by adjacent units, or by one type developing into another. For example, a retirement is frequently preceded by a withdrawal. A retirement may be covered by a force executing a delaying action.

6–29. Purpose

a. Retrograde movements are conducted to accomplish one or more of the following:

(1) To harass, exhaust, and inflict punishment on the enemy.

(2) To draw the enemy into an unfavorable situation.

(3) To permit employment of the command or a portion thereof elsewhere.

(4) To avoid combat under undesirable conditions.

(5) To gain time without fighting a decisive engagement.

(6) To disengage from battle.

(7) To conform to movements of friendly troops.

(8) To shorten lines of communications.

b. Retrograde operations by a defender may permit him, with the lesser portion of his force, to reduce the combat effectiveness of an attacker so that these two forces approach parity. Nuclear fires enhance the effect of a delaying force. The resulting situation permits the defender to seize the initiative with offensive action by his reserve elements. Skillful use of terrain to slow down, confuse, and deceive the enemy is exploited by firepower, demolitions, and raids to make the enemy pay a high price in casualties for the ground he gains.

6–30. Withdrawal

a. Local withdrawals are normal in defensive operations. Combat units may frequently make withdrawals to perform other missions. These withdrawals may involve disengagement from the attacking force. Under certain circumstances, it may be necessary for the defending force, or an element thereof, to execute a general withdrawal. A general withdrawal may be part of a plan, as in a delaying action.

b. A withdrawal not under enemy pressure requires the use of effective countersurveillance and primarily depends on speed of execution and deception. It may be accomplished by stealth or in conjunction with a nuclear or ground attack to divert the enemy's attention. Plans must include provisions for the eventuality of detection and interference with the attempted operation. Successful withdrawals of this type normally will be limited to darkness or other periods of poor visibility or to difficult terrain under conditions of friendly air superiority. Poor visibility and difficult terrain complicate friendly control. The use of smoke and concealed routes assists in reducing the enemy capability to observe friendly movements. Enemy interference by use of airborne or airmobile troops must be anticipated.

c. A withdrawal under enemy pressure de-

pends on maneuver, firepower, and control. All available fires, to include nuclear fires, may be used in the withdrawal of closely engaged friendly forces. Forward elements move to the rear by aggressively employing small-unit delaying tactics. The rearward movement must be coordinated.

d. When simultaneous withdrawal is not practicable, the commander must determine the order of withdrawal. Withdrawing the most heavily engaged units first from the areas of greatest enemy pressure may subject major elements of the command to encirclement and destruction. Withdrawing the least heavily engaged units first may result in loss of all or a major portion of the most heavily engaged units. The decision must be based on a determination of which plan best preserves the integrity of the force and which best contributes to accomplishment of the mission.

e. Reserves are deployed well forward to assist in the withdrawal by fire or ground attack. When withdrawing under pressure, the reserve frequently launches spoiling attacks to disorganize, disrupt, and delay the enemy attack. Reserves may also be used to cover the withdrawal and to extricate encircled or heavily engaged forces.

f. A withdrawal may not always involve planned disengagement. When a force not initially engaged with the enemy withdraws, its continued retrograde movement becomes a retirement (para 6–32).

6–31. Delaying Action

a. The delaying action is a defensive operation in which a force inflicts maximum delay and damage on an attacker without becoming decisively engaged. This is the type of action normally fought by the forward echelons of the mobile defense, although these forces may have some additional restriction on their maneuver and area of operations. Entrapments may also be facilitated by a delaying force.

b. In the delaying action, most of the combat power of the force conducting the operation is disposed in forward areas. Fires are decentralized. Reserves are employed primarily to assist in the disengagement of forward elements.

c. A delaying action may be accomplished on a single position, on successive positions, on alternate positions, or by suitable combinations of these. Delaying positions are organized in limited depth, since full reliance is placed on long-range fires to facilitate the delay. Close combat is avoided.

d. The integration of a delaying action into the mobile defense is covered in paragraph 6–21*a*. It is employed in a similar manner in operations designed to entrap an enemy force.

e. In conducting a delaying action, forces engage the enemy at long ranges to cause casualties and to force him to execute time-consuming deployments. In some situations, however, long-range fires may be deliberately withheld for deception purposes. Delaying forces strive to offer sufficient resistance to prevent infiltration and to force the enemy to mass for deliberate attacks. A massed enemy is attacked and destroyed by fire and, where appropriate, exploited by maneuver. If the operation is not designed to deceive or entrap, the commander of the covering force subjects the advancing enemy column to repeated flank attacks by aggressive mobile forces, inflicting maximum destruction while avoiding decisive engagement. The availability of low-yield nuclear weapons and precision delivery systems will assist disengagement and may permit the command to accept closer engagement than would otherwise be practicable.

6–32. Retirement

a. A retirement normally will be covered by security forces that may execute delaying operations. The retiring force may be subjected to guerrilla attacks, airmobile or airborne raids, long-range fires, and enemy psychological warfare operations. Movement may also be impeded by refugees.

b. Security is an important consideration in executing a retirement. Movement by night is emphasized; day movement may be possible only by infiltration of small groups. Maximum advantage is taken of air mobility. In the initial phases of the retirement, elements of the command may separate and move in dispersed groups to designated assembly areas. The retiring force fights only as required by its mission. Maximum use is made of communications security measures, especially radio listening silence.

Section VI. REAR AREA PROTECTION

6-33. General

Overall area security and control is the responsibility of the senior commander in the area, but rear area protection (RAP) presents problems that are different from those existing in the forward area. The primary mission performed in rear areas is combat service support. The purpose of RAP is to prevent or minimize enemy interruption of combat service support, with its resulting reduction of combat effectiveness of the force. In modern warfare, the threat of such interruption is much greater than in the past. Installations that were formerly protected by distance from the front are now within range of mass-destruction weapons. Extended frontages and wide gaps between combat forces increase the vulnerability of rear areas to attack and require greater emphasis on RAP and counterintelligence measures. RAP is divided functionally into rear area security and area damage control.

6-34. Rear Area Security

a. Rear area security operations are those measures taken before, during, and after an enemy airborne or airmobile attack, sabotage action, infiltration, guerrilla action, to reduce their effects. These measures do not include active air defense operations. Attacks of a magnitude that endangers the entire command are part of the main battle and beyond the scope of rear area security.

b. The enemy capability for airborne, airmobile, guerrilla, or infiltration operations presents a continuous threat to the rear areas of a command. Successful employment of these capabilities by an enemy can have a demoralizing and decisive effect on an unprepared force and can disrupt its continuity of combat service support. In stability operations, requirements for base defense may cause use of combat units for security.

c. Plans to secure the rear area must be prepared to counter the enemy threat. Accurate and timely intelligence concerning the enemy's capabilities, including use of guerrillas, is an important consideration in developing the overall plan. The composition and strength of forces assigned missions of rear area security must be based on the evaluation of the enemy's capability and the primary mission of the overall force. Further, such plans integrate *all* means, to include not only all friendly forces in the area, but friendly guerrillas and paramilitary forces that are available. Successful defense, or destruction of enemy forces in rear areas, depends on the ability of friendly forces of sufficient size to react rapidly and on the effectiveness of communications.

d. The lines of communications, which include all the routes—land, water, and air—that connect an operating military force with a base of operations, and along which supplies and reinforcements move, are the lifelines of the military force in a theater (area) of operations. The longer the lines of communications, the more vulnerable they are to interdiction. The destruction or serious interruption of the lines of communications jeopardizes accomplishment of the force mission and, therefore, constitutes a major consideration in the conduct of effective rear area security operations.

e. Forces committed to rear area security should be adequate to counter the most likely enemy threat or combination of threats. Units located in the rear area must be fully used to contribute to the defense of installations and lines of communications. Effective rear area security requires that each installation plan, prepare, and rehearse for its own defense and its part in the overall rear area security plan. The nature of the threat may require locating or organizing highly mobile combat forces in rear areas. Positive command authority; clear areas of staff responsibility; and adequate, secure communications must be established. Locating and fixing the enemy is one of the major problems in rear area security. Frequently, this may be accomplished best by controlling areas logical for enemy attack until the enemy reveals his location and permits the launching of operations to destroy him.

f. Plans must provide for the defense of critical areas or installations. First priority must be given to the use of combat service support troops for security of their own installations.

A security force may also have to be disposed in dispersed locations where elements can move to block enemy threats. When the enemy is located, those elements of the security force not engaged in blocking are assembled rapidly for decisive action to destroy the enemy. Units may act on their own initiative; however, control must be established to insure coordinated action as the nature of the threat is clarified.

6-35. Area Damage Control

Area damage control includes those measures taken before, during, or after hostile action or natural or manmade disasters to reduce the probability of damage and minimize its effects. These measures include both preventive and readiness actions.

a. Preventive measures include dispersion, rehearsals, construction of protective shelters, development of warning systems, and counterintelligence.

b. Readiness measures include the establishment of area damage control teams. These teams should be equipped and trained to establish control at the scene of the event; assess damage; provide emergency medical treatment and evacuation; provide emergency feeding and water; conduct firefighting and decontamination of materiel; perform traffic control; and monitor, mark, and report the degree of contamination in the area.

6-36. Command Arrangements

a. In the rear area, all commanders are responsible for local security and area damage control for their own units and installations. Overall responsibility for RAP in a specific area is the responsibility of a designated commander. He is responsible for insuring the integration of local security and area damage control plans into an overall RAP plan. When necessary for operational control and coordination, subareas are formed within the rear area. All units physically within the subarea, including combat unit replacements awaiting assignment, are integrated into the RAP plans for that subarea. These plans are coordinated between adjacent units and with higher headquarters.

b. RAP and combat service support activities are performed in the same geographic area and involve the same forces. Since the use of combat service support units in RAP is a diversion from their primary mission of supporting combat forces, the manner and extent to which these units are diverted must be the decision of the commander responsible for all these interrelated activities. Thus, an effective system for RAP must possess the following characteristics:

(1) A single commander responsible for activities in the same geographic area with the necessary staff and communications. These arrangements must not be temporary or improvised or be established only after attack.

(2) A definite fixing of geographic responsibility.

(3) A control structure that prevents conflict and competition among organizations responsible for rear area security, area damage control, and combat service support.

6-37. Defense Against Airborne and Airmobile Attack

a. Defense against airborne or airmobile attack includes air defense measures, a warning system, troops disposed or available to defend likely landing zones and objectives, and a mobile reserve. Every effort is made to isolate and prevent reinforcement of the enemy forces. If local forces are not able to defeat the attacker, they form a base for counterattack by stronger, mobile reserves. Armor is effective against airborne and airmobile forces when available and when the terrain permits its use.

b. A major problem is to obtain accurate information on the location and extent of enemy landings. This problem results from exaggerated reports, scattered landings, and communications breakdowns in the affected areas. All means of observation and communications are used. Unless ground vehicles are air transported in large numbers, airborne forces are relatively immobile after landing. This usually requires that airborne forces land on or near their objectives. This fact can be used to advantage by the commander in planning his defense. It assists him in deciding where to deploy forces in anticipation of airborne attack and how to employ them during the attack. Consistent with troop safety, nuclear weapons are used against enemy formations in the air

and during landing, or on their assembly areas when they can be located.

c. When a major airborne or airmobile threat justifies the expenditure of resources, and when time permits, obstacles and barriers are improved or constructed in likely drop and landing zones and in exits toward logical enemy objectives. While obstacles and barriers cannot be considered an absolute defense against airborne attack, they impede the enemy and deny him free use of available terrain and may reduce the number of forces necessary to defend key areas. Inundation, prepositioned atomic demolition munitions, and chemical agents should be considered in antiairborne or antiairmobile defense.

6–38. Defense Against Infiltration

a. Defense against infiltration becomes increasingly important as dispersion on the battlefield increases. Enemy forces may infiltrate and assemble in rear areas for attack. An infiltrated enemy force constitutes an enemy target acquisition unit that can call down accurate, long-range fires. Early detection and elimination of these forces are essential.

b. Measures that aid in controlling infiltration include extensive counterreconnaissance, combat patrols, antipersonnel obstacles, warning devices, electronic surveillance devices, air cavalry, and defoliation of wooded approach routes. Every effort is made to identify likely enemy assembly areas to the rear of friendly forces. Priority is given to destroying the enemy in these areas before he can reorganize and launch his attack.

6–39. Defense Against Guerrilla Forces

a. All units and installations are subject to guerrilla attack and sabotage. Effective local security is essential to defense against these attacks. Special provisions are made for—

(1) Ground and air reconnaissance of rear areas.

(2) Aggressive patrolling in the local areas and between installations.

(3) Mutual assistance by adjacent units.

(4) Defense of installations and critical areas.

(5) Armed escorts.

(6) Use of friendly civilians as guides, agents, or counterguerrilla units.

(7) Mobile combat forces using air or ground vehicles, or a combination of both, to take offensive action against guerrillas.

b. Intelligence is required on areas suitable for guerrilla bases, identity of guerrilla leaders and civilian supporters, communications facilities, and sources of supply. Guerrilla effectiveness depends in great measure on current information. Thus, care must be taken to prevent their securing information of friendly operations, installations, and troop movements. Particular attention must be given to communications security, especially transmission security measures.

c. The political, administrative, and economic aspects of the area are considered in defense planning. Special attention should be given to measures to deny logistic support to the guerrilla force. Guerrilla forces cannot operate effectively unless supported in some degree by the local populace. Continuous effort must be placed on gaining the support of the local populace in counterguerrilla operations. Planning is coordinated with overall RAP planning. Information on the conduct of populace and resources control operations is contained in FM 31–23.

d. Additional details on counterguerrilla operations are contained in FM 31–16.

Section VII. BATTLE UNDER SPECIAL CONDITIONS

6–40. General

Battle under special conditions encompasses those operations in which the natural and manmade characteristics of the area, the nature of the operations, the unique conditions under which the operations may be conducted, or a combination of these, may require specially trained troops and special techniques, tactics, or materiel. All Army forces are capable of operations under these conditions, but special training and equipment may be required.

6-41. Fortified Areas

a. A fortified area is characterized by numerous mutually supporting defensive works and localities, organized in width and depth. Seldom will the fortified area be a single strongly organized locality. Fortified areas provide the defender with a high degree of protection and permit economy of force. Defensive works may consist of permanent-type fortifications and extensively developed field fortifications located within an extensive barrier system. Additional characteristics of a fortified area include a strong outpost system, which, in itself, may be fortified; a well-developed road and signal net; and a highly mobile reserve centrally located and provided with an extensive network of covered approaches.

b. In offensive operations, enemy fortified areas are normally contained by minimum friendly forces, while the main force bypasses and continues the advance to more distant and decisive objectives. Action to reduce a fortified area may include a siege or an attack from the rear. NBC munitions facilitate the destruction and neutralization of fortified areas. The ability of biological and chemical agents to penetrate structures and fortifications lessens the effectiveness of cover. Surface and subsurface nuclear bursts may be employed to create gaps in the fortified area or to isolate sections of the area. If nuclear bursts are used, they must be carefully coordinated with adjacent forces and evaluated as to possible interference with friendly maneuver.

c. A primary purpose for the defense of a fortified area is to involve the enemy in reducing fortified positions so that he dissipates his power and becomes vulnerable to counterattacking forces. Such a defense permits economy of force in forward areas, thus making available proportionately larger reserves for a counterattack. These reserves must be highly mobile and aggressively employed to insure the successful defense of a fortified area.

d. Details on combat in fortified and built-up areas are contained in FM 31-50.

6-42. Built-Up Areas

a. Built-up areas containing solid masonry or concrete and steel structures modified for defense purposes resemble fortified areas. These areas are conspicuous topographical features for which details are usually available. They offer cover and concealment for troops and weapons. Built-up areas may be untenable because of their susceptibility to neutralization or destruction by conventional or nuclear munitions. These areas are also vulnerable to neutralization by biological or chemical munitions. Extensive subterranean systems may provide the defender with additional protection. Built-up areas reduced to rubble retain their defensive characteristics and restrict the use of motorized or mechanized forces. Fighting in built-up areas is characterized by close combat, limited fields of fire and observation, canalization of vehicular movement, and difficulty in control of troops. In employing NBC weapons, the commander must consider their effect on the civilian population and make plans for its control and evacuation.

b. When practicable, built-up areas are bypassed and isolated. If they must be reduced, methods applicable to reduction of fortified areas are employed. Terrain dominating the approaches is secured to isolate the area. Mobile forces are used best in the enveloping role. Objectives within the built-up area are selected to divide the enemy defense. In a nuclear environment, the advantages gained through the use of nuclear weapons must be weighed against the creation of obstacles to the assault force.

c. The defense of a built-up area should be organized around key features whose retention preserves the integrity of the defense and permits the defender to move readily. Plans should provide for using subterranean systems in defending against nuclear attack. A built-up area is primarily an obstacle to the attacker, but may also be an obstacle to the defender in counterattack operations. Consequently, consideration should be given to defending outside the built-up area. Defense of a built-up area must provide for a reserve to counter enemy action within the built-up area and on the dominating terrain outside the area.

6-43. River Lines

a. Wide, unfordable rivers impose restrictions on movement and maneuver. They consti-

tute obstacles to the attacker and form natural lines of resistance for the defender. An attack across an unfordable river requires tactical and technical preparations proportionate to the size of the river and the relative strength of opposing forces. Other requirements for the attack of a river line are special types of intelligence, specialized training, close coordination of all forces, crossing equipment, and adequate means for control during the crossing. The timely use of airmobile and airborne forces facilitates river crossings and should be fully exploited. Maximum use is made of Army aviation in all stages of river-crossing operations.

b. As a result of the planning initiated during the advance to a river, the commander deploys forces in a manner that insures ready availability of essential crossing means when the river is reached. The advance to an unfordable river is made with great speed on a broad front. Speed and violence in the attack, plus the confusion of battle, may create an opportunity to secure bridges before the enemy destroys them. The actual crossing of a river is part of the overall operation and not the primary objective. Supporting fires, particularly nuclear or chemical, may be used to secure a bridge intact by neutralizing the personnel defending the bridge. The advantage gained by capturing a bridge must be exploited. A bridgehead must be promptly established to secure or construct the bridge and permit crossing of the remainder of the command.

c. In a nuclear environment, the capability of the defender to employ nuclear weapons amplifies the requirement for multiple crossings on extended frontages. Continuous movement, without delay for buildup, is essential. Combat forces mounted in amphibious armored vehicles speed the crossing and reduce the dependence on bridges.

d. Defense of a river line is facilitated by the organization for defense that exploits the natural terrain features and the resources available. Only screening forces may be at the river line when the defense is being conducted primarily by nuclear fires.

e. Details on river-crossing operations are contained in FM 31-60.

6-44. Jungles

a. Jungles are areas of tropical rain forest and secondary growth, varying in locale from mountains to low-lying swampy plains. They are further characterized by a lack of industrial or cultural development and fully developed lines of communications. Jungle terrain and climate limit movement, observation, fields of fire, communications, and control. Because of these limitations, the difficulties of jungle operations increase in proportion to the size of the force involved. Cover and concealment are excellent in this type of terrain and increase the possibility of achieving surprise. As a result, both the attacker and the defender commit large portions of available forces to security missions. Key terrain features in jungles include trails, navigable rivers, high ground, and communications centers. These features are difficult to identify because of inferior maps and limited visibility. The value of high ground may be reduced by restrictions on observation and fields of fire. An additional characteristic of jungle operations is the reduced capability to acquire targets. Heavy forests have characteristics similar to those of jungles.

b. In the offensive, security elements are essential to prevent surprise and to protect the command. In jungles, successful security force operations are dependent on proper training and conditioning of troops in off-trail movement. Airmobile and airborne units with air lines of supply facilitate jungle operations. Since the size of offensive operations is often limited by the capability to resupply the force, bases of supply are profitable targets for attack.

c. The critical aspect of a defense in jungles is the communications network. To guard against surprise, the defense must be organized in depth, provide all-round defense, and contain well-organized security forces both for the defended area and for supply routes. Provision must be made for a mobile reserve. Biological and chemical agents are particularly effective in jungle operations because of the nature of the terrain and atmospheric conditions. Defoliants can be used to improve observation and fields of fire. If nuclear weapons are employed,

they can be used to create obstacles through blast effects or radiological contamination to enhance any natural obstacles that may be present.

d. Details on jungle operations are contained in FM 31-30.

6-45. Deserts

a. Deserts are semiarid and arid regions containing a wide variety of soils in varying relief. Deserts have one common characteristic —lack of precipitation, which results in a limited water supply. However, flash floods occur in these regions. Because of the shortage of water, vegetation is scarce. In these areas, military operations rely on an adequate supply of water. Depending on the terrain relief and the trafficability of the soil, the lack of roads may or may not canalize operations. A greater freedom of movement exists in these regions than in other areas. Highly mobile forces may play a dominant role in operations in semiarid and arid regions. Freedom of maneuver and the vastness of these regions favor a fluid type of warfare characterized by dispersed formations on extended frontages with considerable depth. Additional characteristics include increased problems of control, limited concealment, difficulty in determining location and maintaining direction, increased combat service support and equipment maintenance problems, and a requirement for specialized training and acclimation of all personnel. Ground reconnaissance forces, provided with armor and air defense means, and air reconnaissance elements are essential to prevent surprise. Air superiority is extremely important to successful desert operations.

b. During offensive operations in semiarid and arid regions, wide envelopments by armored, mechanized, or motorized forces are favored because of freedom of maneuver. Because of limited concealment, surprise must be attained by deception, appropriate communications security measures, and rapid movement. Periods of limited visibility should be exploited. Objectives for the attack include enemy troops, communications centers, supply bases, water sources, and key terrain features. The influence of climate and terrain in arid regions must be considered in planning the use of nuclear weapons. Likely nuclear targets include combat service support and air installations.

c. Defensive operations in these regions emphasize mobility and flexibility. Provision should be made for direct fire weapons, a high degree of mobility, and adequate and secure communications. The organization of the defense should emphasize measures against air and armor attack.

d. Details on desert operations are contained in FM 31-25.

6-46. Mountains

a. Mountains cause compartmentation of military operations. Their rugged characteristics limit road nets. Vegetation may vary from jungle to bare slopes. The weather is characterized by rapid, extreme changes in temperature accompanied by mist, rain, or snow. Operations in mountains frequently require special equipment, training and acclimation of personnel to altitude conditions. Mountainous terrain retards and restricts mobility, reduces the effect of firepower, and makes communications and supply difficult. Key terrain features include heights that dominate lines of communications, mountain passes, roads, bridges, and railroads. Within density-altitude limitations, helicopters are valuable for moving equipment and personnel. Nuclear and chemical weapons can be used in mountain operations to restrict movement. Increased reliance must be placed on weapons having a high angle of fire and on armed aircraft.

b. In mountain operations, frontal attack of an enemy position is avoided whenever possible. Envelopment of enemy positions is facilitated by the crossing of difficult terrain with specially trained and organized forces. Air-transported forces are ideally suited for envelopments. Although centrally planned, the execution of attacks is normally decentralized because the capability for control is limited by terrain. The use of armor in the maneuver force will be reduced, but its direct fire capabilities are used when possible. Flanks, defiles, road nets, and communications centers must be secured. When nuclear weapons are available

to support the attack, small-yield weapons may be favored to avoid blocking restricted avenues of approach.

c. Control of dominating terrain protecting road nets or passes normally is the key to the organization of a defense in mountainous areas. Security forces are required to prevent surprise, particularly of observation posts and patrols. Air reconnaissance is useful as a security means and permits observation of otherwise inaccessible terrain. Although counterattacks are difficult to plan and execute, they can be decisive if timed properly. Nuclear and chemical weapons can canalize the enemy or augment barrier plans.

d. Details on mountain operations are contained in FM 31–72.

6–47. Deep Snow and Extreme Cold Operations

a. Deep snow and extreme cold are found in the arctic, subarctic, and temperate zones and at high altitudes in all zones. The areas in which these conditions exist vary from forested to relatively barren regions and vary extensively in population. The subarctic and arctic regions of the world constitute the largest areas of deep snow and extreme cold. An additional characteristic of these areas is the obstacles to movement created by thaws. Deep snow does not necessarily reduce the mobility of properly trained and equipped troops; in certain terrain, it may enhance their mobility.

b. The conduct of operations in arctic and subarctic regions will require the application of special techniques and equipment and will be affected by the following factors:

(1) During the winter, cold, snow, frozen waterways, permafrost, and short periods of daylight prevail. These factors create problems, such as constant need for shelter and heat, increased dependence of tactical operations on combat service support, difficulties in the construction of field fortifications, difficulties in establishing and maintaining communications, and need for special winter equipment and clothing. Aircraft may use frozen lakes and rivers for landing areas.

(2) During the summer, the area is characterized by numerous and extensive swamps, lakes, and rivers; abundant insects; and, at times, continuous daylight. Special equipment such as boats and low ground-pressure tracked vehicles, is needed. During these conditions, decreased mobility and increased vulnerability make special skills in movements a prime consideration.

(3) During the spring breakup, sudden thaws weaken the ice on waterways and swamps and make existing roads almost impassable. The ground thaws to a depth varying from a few inches to several feet, depending on the geographic location of the area. These factors will hamper extensive overland movement.

(4) During the fall, ground and waterways frequently freeze before heavy snow falls. Before the snowfall, troops and vehicles can move cross country with ease; however, in some cases early snowfall will insulate the ground and prevent its freezing until late in winter. This condition impedes cross-country mobility.

(5) During all seasons, the lack or scarcity of roads affects large-scale operations, particularly combat service support, which increases the requirement for engineer support and extensive use of air lines of communications. Limited map coverage adds importance to effective navigation and control measures. Extensive forests and barren land complicate all types of operations.

c. Offensive and defensive operations in these areas are conducted as in other climates. However, operations in these areas will require greater combat service support—especially fuel, clothing, and shelter—and more time to accomplish even simple tasks. Since road-bound troops are extremely vulnerable to all types of enemy action, the capability to move cross country is a requirement for successful operations. The control of land routes of communications is vital in both offensive and defensive operations. Typical nuclear targets include combat service support installations and communications centers.

d. Details on northern operations are contained in FM 31–71.

6–48. Riverine Operations

a. Riverine operations are military opera-

tions conducted in areas with extensive inland waterways and inundated or swampy terrain.

b. A riverine area is a land environment characterized by water lines of communications with an extensive network of rivers, streams, canals, paddies, swamps, or muskeg extending over broad, level terrain, parts of which may be inundated periodically or permanently. It may include sparsely populated swamps or forests, rivers and streams that have steep banks densely covered with tropical trees or bamboo, and relatively flat and open terrain. Ocean tides may affect riverine areas near the seashore or far inland. These areas may support a large agrarian population concentrated along the waterways, e.g., the rice-growing delta areas of Southeast Asia. Other riverine areas may be completely devoid of human habitation, e.g., the vast muskeg swamp areas of northern Asia and North America.

c. In developing areas where overland transportation capabilities are limited and surface water is abundant, inland waterways provide natural routes for transportation and communications and are logical centers of population. In riverine areas water routes have strategic and tactical importance to military forces. They are particularly important to guerrilla forces in insurgency operations. Defeat of insurgents in a riverine environment requires interdiction and control of waterways and adjacent land areas.

d. Riverine operations include all military activities designed to achieve or maintain territorial control of a riverine area by destroying hostile forces and restricting or eliminating hostile activities. A characteristic of riverine operations is the extensive use of joint watermobile forces, together with groundmobile and airmobile forces, in a predominant land battle. Airmobile forces are particularly suited for use in blocking, reserve, or reaction roles in riverine operations because their movement is unrestricted by terrain. The basic nature of riverine operations is ground combat in a land environment characterized by water lines of communications.

e. The optimum organization for command and control of riverine operations involving both Army and Navy elements is the joint task force (JTF). The commander of the Army component committed in a riverine area is the JTF commander, with a small joint staff formed from the assigned component staffs. The unified commander may consider that adequate assistance can be provided by a close support relationship. This method provides for control of a riverine operation by mutual cooperation and coordination, with the Navy element providing close support to the Army forces.

f. All means of mobility are somewhat restricted during riverine operations. Foot movement is least desirable for maneuvering forces; it exhausts troops and severely limits their rate of movement. Movement and maneuver normally require a combination of available means of mobility—foot, wheeled or tracked vehicles, shallow-draft boats, helicopters, and fixed-wing aircraft. Water transportation may be used extensively to move troops and equipment. Exploiting the movement, fire support, and logistic capabilities of supporting Navy elements significantly enhances Army firepower and maneuver capabilities.

g. Tactics and techniques governing other ground operations apply in riverine areas. Special organizational and operational procedures are required when offensive ground forces, supported by naval ships and craft, operate directly from inland waterways.

h. Riverine operations are distinct from amphibious operations in that they require continual use of specialized watercraft, equipment, and techniques. However, certain principles and techniques of amphibious operations can be adapted to riverine operations.

i. The significant difference between riverine and conventional operations is that in riverine operations one or more elements of the force use existing waterways as the primary line of communications. The nature of riverine operations necessitates integrating the operations of ground forces, naval units, and supporting air elements. Coordination and cooperation among participants are mandatory. Their operations are interdependent; however, since the basic nature of riverine warfare is sustained ground combat, all forces must be considered a single

tactical entity responsive to the needs and requirements of the ground force.

j. For further information on riverine operations, see FM 61-100 and FM 31-75 (Test).

6-49. Ranger Operations

Ranger operations are overt operations by highly trained units to any depth into enemy-held areas for the purpose of reconnaissance, raids, and general disruption of enemy operations. Depth and duration of the operations are limited only by the resources for delivery of the forces and their mission. For further information, see FM 21-50.

Section VIII. RELIEF OF COMBAT UNITS

6-50. General

a. When tactical operations continue for a prolonged period, conservation of fighting power, maintenance of effectiveness, and the requirements of the tactical plan may necessitate the periodic relief of units. Such reliefs will be accomplished by relief in place, passage of lines, or withdrawal through a rearward position.

b. The congestion inherent in each of these relief operations requires detailed consideration of measures to reduce vulnerability and risk of enemy attack. Close cooperation and coordination of plans among the units involved are essential. The appearance of normal activity should be maintained during these operations. Maximum use is made of darkness and other periods of poor visibility. Secrecy, deception, and speed of execution are emphasized. Arrangements must provide for the transfer of command between the commanders involved. Under nuclear conditions, relief in place and passage of lines are highly vulnerable operations, which, when required, must be conducted with speed and secrecy. Particular attention must be given to communications security measures.

6-51. Relief in Place

a. A relief in place is an operation in which all or part of a unit is replaced by the incoming unit. The responsibilities of the replaced elements, which may involve attack or defense, are transferred to the incoming unit. The incoming unit may be assigned a new mission upon completion of the relief.

b. The commander of a unit being relieved is responsible for the defense of his assigned sector until the passage of command. The time of passage of command, to include operational control of incoming and outgoing units, is determined by mutual agreement of the affected commanders unless it has been specified by higher headquarters. This passage normally occurs when the forward area commanders have assumed area responsibility, and the incoming force commander has established necessary communications to control the entire sector.

c. In a relief in place for continuation of the defense, the incoming unit must conform with the general defense plan of the outgoing unit until passage of command. Every effort must be made to accomplish the relief without weakening the tactical integrity of the position. Combat support units normally should not be relieved at the same time as combat elements.

6-52. Passage of Lines

a. A passage of lines is an operation in which an incoming unit attacks through a unit that is in contact with the enemy, or when a unit withdraws through another unit occupying a rearward position.

b. In a forward passage of lines, the unit being passed through supports the attacking unit until their fires are masked, at which time they may remain in position, be withdrawn, or committed to other action. The passing unit normally is given priority in the use of facilities. The passage is made as rapidly as possible to reduce vulnerability to attack.

c. In the rearward passage of lines, the unit in position provides maximum assistance to the withdrawing unit and takes up either the delaying mission of the withdrawing unit or the defense when the passage has been completed. The withdrawing unit is given priority on roads and facilities, provided it does not interfere with the defense. The defensive plan must

be considered in selecting points for the passage. The points and routes should be kept to a minimum, consistent with the need to reduce vulnerability and to avoid occupied defensive positions. Measures should be adopted for mutual recognition of the affected units and notification of the defending force when the withdrawal is complete.

Section IX. OPERATIONS DURING UNRESTRICTED SCALE OF USE OF NUCLEAR WEAPONS

6–53. General

a. This section discusses the operational employment of Army forces during periods of unrestricted scale of use of nuclear weapons, as defined in paragraph 6–4*b*.

b. The environment visualized herein is one in which nuclear weapons are employed in both quantity and yield to such an extent that their effects will saturate the battle area. As a result, the ability of ground forces to maneuver decisively will be drastically reduced temporarily. While larger forces normally will be unable to maneuver without prohibitive losses, small units up to battalion size frequently will be able to move with sufficient freedom to permit them to continue effective operations. Furthermore, there will be local variations in the level of effects that will allow forces of substantial size to continue their assigned missions without being unduly restricted in their ability to maneuver.

c. Because a prolonged, intensive exchange of nuclear fires is extremely devastating and results in widespread destruction of both military forces and the civilian population, such operations can be expected to be of relatively short duration.

d. Decisive results will accrue to the combat force that can gain nuclear fire superiority in the exchange, and at the same time preserve sufficient maneuver elements to exploit the fire ascendancy when achieved.

e. The full capabilities of nuclear weapon delivery systems are employed to achieve fire superiority. High-priority targets include enemy nuclear delivery sites and associated control systems, weapon stockpiles, and command and communications facilities. Intelligence efforts are focused on the development of these targets.

f. The major consideration is reduction of the nuclear-effects level to an extent that will permit combat forces to resume effective maneuver. It is to this end that fire superiority over the opposing force is sought, even though the efforts in this regard may temporarily raise the level of nuclear effects. Once the enemy's nuclear delivery capability has been reduced significantly, the nuclear-effects level can be permitted to subside, and combat forces can again employ maneuver decisively.

g. The widespread destruction of the civilian environment will magnify the problems of control over the population and restoration of governmental institutions and may require the use of Army forces to support or replace civilian governmental authority.

h. During periods of unrestricted scale of use of nuclear weapons, Army forces will participate in the efforts to gain nuclear fire superiority, conduct limited offensive and defensive operations, and preserve force integrity for the subsequent exploitation phase.

i. Small combat units, besides performing reconnaissance and security missions, are employed in limited offensive and defensive operations. Appropriate offensive tasks include infiltration of enemy-controlled areas to secure key terrain and destroy important installations. Defensively, these units are employed to counter similar attacks by the enemy. Offensive efforts should not be permitted to compromise the integrity and effectiveness of the major force through a series of unprofitable actions.

j. Guerrilla forces may be used to obtain information; conduct interdiction operations; and attack enemy communications, control facilities, and other critical installations.

k. Deception operations are initiated to mislead the enemy concerning the location of friendly troops and critical installations and to cause him to expend his nuclear weapons on unprofitable targets. Electronic deception is undertaken in coordination with other planned electronic warfare operations.

l. Electronic warfare operations include both passive (communications and electronic security) and active (jamming and deception) measures and countermeasures. Active electronic countermeasures are taken against airborne and ground-based communications and noncommunications radiators. Prime targets include combat surveillance, reconnaissance, target acquisition, countermortar/counterbattery, command and control communications, data link, fuzed ordnance, missile and missile delivery systems, and aircraft electronics.

6–54. Force Integrity

Those forces that cannot be profitably employed in the efforts to gain fire superiority must be preserved for the exploitation phase that follows. Normally, a significant amount of the combat and combat support elements of a force fall into this category. These forces are dispersed and concealed in protected positions in a defensive posture. Their primary mission is retention of operational integrity and survival.

6–55. Exploitation

Following the nuclear exchange, the combat and combat support elements must be reconstituted rapidly to resume or initiate mobile operations. Since both combatants will undoubtedly suffer severe damage during the nuclear firefight, even a small, highly mobile exploitation force may achieve decisive results when employed in an aggressive and timely manner. Additional forces are reconstituted, refitted, and committed to action as resources permit.

6–56. Support Elements

Support forces that can contribute to the efforts to gain fire ascendancy are so employed. Other supporting forces devote their efforts to survival and to preservation of their resources for the exploitation phase.

★CHAPTER 7

AIR MOVEMENTS AND AIRBORNE OPERATIONS

Section I. GENERAL

7–1. Introduction

a. The United States maintains its Armed Forces in a posture that permits timely response to the demands of its national strategy. In particular, the United States must be capable of rapidly deploying sufficient forces and materiel to any potential trouble spot in the world. This mobility both acts as a deterrent to the would-be aggressors and facilitates the geographic containment of combat actions until sufficient combat power can be committed to defeat the aggressor.

b. This chapter deals with the movement of Army forces by air in Air Force airlift aircraft for administrative or tactical purposes. Details on such operations are found in FM 57–1, FM 61–100, and FM 100–27.

c. Army forces located in the United States and overseas are maintained as part of strategic mobile forces capable of rapid deployment to any part of the world. Movement of these forces by Air Force aircraft extends the range of the mobile forces and provides timely intertheater and intratheater deployment to execute military operations. The forces may be moved directly to the objective area or they may be moved to intermediate staging areas from which they can be further deployed by Army means or relifted by Air Force airlift aircraft. Stockpiling supplies and equipment near areas of anticipated employment increases strategic mobility by reducing the requirements for airlift aircraft.

7–2. Characteristics

Airborne operations combine the speed and flexibility of Air Force airlift aircraft with the land combat capability of Army forces. An airborne operation can be initiated by either administrative or operational (tactical) air movement as part of a strategic or tactical operation. The assault operation may be by parachute or airland or by a combination of them. The ground forces involved may be units especially organized and equipped to conduct airborne operations, conventionally organized air-transportable units, or a combination of them.

7–3. Classification

a. Airborne operations are classified as short duration or long duration.

b. Short-duration operations are conducted with minimum reinforcement and air-delivered followup supply. Only essential combat service support is provided in the objective area. The operation terminates with the early linkup, relief, withdrawal, or restaging of the force for subsequent operations.

c. Long-duration operations require reinforcement of the airborne force by combat, combat support, and combat service support units and include substantial use of air-transportable units in an airland and followup role. The force employed is usually committed to sustained ground combat. Long-duration operations involve a considerable buildup of troops, supplies, and equipment by air.

7–4. Concepts

Successful airborne operations utilize speed of landing and concentration of mass to compensate for initial lack of firepower and mobility in an objective area. These forces have the advantage of initiative, surprise, and shock effect. Assault forces also will frequently be at full strength and will have the advantage of special training and, when feasible, operational rehearsals. Large-scale airborne operations require multiple dispersed airfields in the departure area and suitable landing zones in the objective area if airlandings are planned.

7–5. Nuclear Environment

a. The nature of an air movement operation makes the forces involved particularly vulnerable

to enemy nuclear attack. The enemy nuclear capability and the manner in which it may be employed must be carefully evaluated. The hazards to aircraft and operating personnel from both friendly or enemy nuclear fires must be considered.

b. The vulnerability of the force can be minimized by reducing the execution time of each phase of the operation and by strictly observing appropriate communications security measures during the planning and execution phases of operation. Additional considerations that contribute to lessening the vulnerability are dispersed marshaling areas, multiple air columns and small serials, a large multiple airhead complex, and rapid assembly and movement of forces from the landing area to initial objectives.

7–6. Deployment Concepts

a. The transporting of Army units, personnel, equipment, and supplies in Air Force airlift aircraft for any purpose, including airdrop and airland, is broadly termed an "air movement operation." Generally, two types of air movements are recognized: administrative and operational. Administrative air movements provide the capability to deploy and sustain an effective military force from CONUS or from one theater to another to counter any enemy act or threat. Operational air movements are associated with the movement of personnel and cargo by airlift forces available to the theater commander to conduct and support combat operations within the theater. U.S. Army forces are organized and equipped to respond to both administrative and operational (tactical) movements.

b. The term "airborne operation" describes an air movement operation in which ground combat forces and their combat and combat service support are delivered by Air Force aircraft into an objective area for execution of an administrative or operational mission. The ground combat force may be comprised of air-transportable or airborne units, or a combination of them. They may be airdropped or airlanded. Army forces participating in an airborne operation are referred to as airborne forces. An administrative air movement is not considered an airborne operation although the procedures used in airborne operations may be applicable.

Section II. ORGANIZATION AND MISSIONS OF AIRLIFT FORCES

7–7. Organizational Concepts

a. The U.S. Air Force is responsible for providing air transport to the Services. To accomplish this, the Air Force maintains both strategic and tactical airlift organization and, in coordination with other Services, develops the doctrine, tactics, and procedures employed by these forces.

b. Airlift forces are maintained at a high peacetime manning and utilization rate to insure that adequate routes and facilities exist for execution of wartime or contingency missions. The procedures followed in peacetime are the same as those for wartime operations, as is the structure to command, control, and support the airlift force. This concept insures that a smooth transition from peacetime to wartime conditions can be made by expanding and accelerating existing operations. In addition, techniques and procedures of strategic and tactical airlift organizations are complementary so that the forces of each may be used to augment the other. These latter arrangements are designed to permit air movement of combat forces and their support from departure point to final destination with a minimum of command changes and transfer points.

c. The size and the composition of the airlift force for a given operation are determined by the requirements of the supported force and may vary from a few aircraft to total mobilization of all national airlift resources. Regardless of size, however, the forces for both strategic and tactical airlift operations must contain certain elements that are essential to air movement operations, e.g.—

(1) Airlift aircraft with the capability to fly under adverse weather conditions and a limited capability to airland and airdrop personnel and materiel in the combat zone under adverse weather conditions.

(2) Aerial port units trained and equipped to provide terminal operations support.

(3) An air movement command and control system that permits centralized direction of the overall operation with decentralized execution of the several separate functions. The system may also provide facilities for the ground force commander to control his forces en route and prior to execution of a parachute assault through establishment of an airborne command post.

(4) Administrative, logistic, and communication support elements for the airlift force.

7–8. Composition of Airlift Resources

a. Active Military Forces. Active U.S. Air Force strategic and tactical airlift organizations provide the rapid initial response necessary in contingency situations. Strategic airlift forces are normally employed between continental United States (CONUS) and oversea theaters and between oversea theaters. Tactical airlift forces are normally employed within a theater. When the situation requires, however, either force may be employed in the other's role for short periods.

b. Air Reserve Forces. Air Force Reserve and Air National Guard airlift units have a wartime mobility assignment to augment the airlift resources of the Active forces. The capabilities of the Reserve forces are used on an opportune basis in peacetime for routine logistic operations, special missions, exercises, and contingencies to insure wartime responsiveness. These resources are considered an integral part of the total airlift force.

c. Civil Reserve Air Fleet. The Civil Reserve Air Fleet is comprised of specifically identified aircraft owned by commercial airlines, which are operationally suitable for augmenting the Air Force strategic airlift force. When activated, operations of the Civil Reserve Air Fleet are managed by the U.S. Air Force; however, the aircraft are operated on contract by the commercial airline out of the civil airports utilizing company crews and ground support facilities.

7–9. Missions of Airlift Forces

a. The missions of airlift organizations include strategic deployment of combat forces, tactical movement of these forces, aerial supply, resupply, and aeromedical evacuation. Wide latitude in selection of techniques to accomplish these missions is possible because of the flexibility inherent to airlift operations.

b. Contingency operations, which require rapid deployment of combat forces to support friendly nations or protect the national interests, are the most important mission of the airlift forces. Such operations are normally conducted to support existing war plans, but they may be executed to provide the application of force in unplanned areas on an emergency basis.

c. Support of strategic deployment of forces and the strategic resupply operations for these forces are primary tasks of the strategic airlift force. When port facilities road, rail, and/or inland waterway networks become operational, airlift is used to deliver critical, high-priority items. Two types of airlift service are operated.

(1) Common-user airlift service is operated from established or mutually agreed on aerial ports over established air routes. Continuing, preplanned logistic and personnel air movements normally use this service.

(2) Special assignment airlift missions are requested to move cargo requiring special handling or to move personnel and cargo between points other than those in the established common-user system.

d. Tactical employment of ground combat units by airlift refers to the assault landing or parachute assault of airborne forces on or near an immediate tactical objective. Airlift resources for these operations are normally provided by tactical air forces assigned within the theater. When the ground combat units to be employed are drawn from sources outside the theater or when there is insufficient tactical airlift resources in the theater to execute the assault, strategic airlift forces may be used.

e. Movement of personnel and cargo by tactical airlift within a theater is accomplished by preplanned or scheduled route service or by allocation of airlift sorties to supported units.

f. Aeromedical evacuation between oversea areas and CONUS is provided by turnaround aircraft of the strategic airlift force. Evacuation within an oversea theater is provided by the tactical airlift forces assigned to the theater. Evacuation from an assault airhead is provided by the airlift force servicing the airhead.

g. Civil Reserve Air Fleet aircraft are assigned passenger and cargo missions within CONUS and in oversea theaters. Aircraft are used in their commercial configuration to the extent possible. Cargo aircraft assigned to the fleet are required to be compatible with the Air Force materials handling system; however, only palletized or bulk cargo is hauled. Passenger aircraft may have high-density seating installed if the aircraft is configured to receive this modification. All extra seating, cargo tie-down equipment, and cargo restraining nets are provided by the commercial carrier. Palletizing is accomplished by the user.

7–10. Activation of the Civil Reserve Air Fleet

a. The Civil Reserve Air Fleet is a contracted

organization that uses the commercial carrier's organization, equipment, personnel, and operating knowledge. Contracting carriers are pledged to provide the designated amount of airlift in response to airlift emergencies as determined by the appropriate governmental agencies.

b. Activation procedures provide for a gradual application of Civil Reserve Air Fleet resources through three incremental airlift emergency stages. Airlift emergency stages are expressed by increasing severity as follows:

(1) *Stage I.* The Commanding General, Military Airlift Command (MAC), has the authority to declare a Stage I committed expansion. This is expansion airlift committed to the MAC to perform airlift when the MAC force cannot meet both deployment and channel traffic requirements simultaneously.

(2) *Stage II.* The Secretary of Defense has the authority to declare a Stage II airlift emergency. This is additional airlift expansion identified for a major contingency airlift emergency not warranted by a national mobilization.

(3) *Stage III.* A Stage III national emergency may be declared by the Secretary of Defense only after the President or Congress of the United States has declared an unlimited national emergency, or by the Director, Office of Emergency Preparedness, when given specific authority. This stage requires activation of the total CRAF airlift capability for Department of Defense during major military emergencies involving U.S. forces.

Section III. STRATEGIC AIR MOVEMENTS

7–11. Characteristics

Strategic air transport operations are movements in which combat forces are moved from CONUS to an oversea theater, or from one oversea theater to another. Such deployments are usually undertaken to counter a hostile threat to the security of the United States or its allies by reinforcing combat elements present in a theater or by positioning combat elements where none are present. The emergency may occur without notice or it may be the result of increasing international tensions over a period of time. The forces deployed are usually delivered to aerial ports in friendly hands, but they may be directly introduced into an objective area by parachute assault or airlanded operation.

7–12. Responsibilities

a. Approved operations and contingency plans are the basis for determining the strategic airlift requirements of Army organizations. Based on such plans, commanders of CONUS units prepare tentative plans for loading and submit their airlift requirements through command channels to the unified commander, or, if no unified command structure exists, to the Department of the Army. Units in oversea theaters submit their requirements through Army component command channels to the theater commander. Requirements are expressed in as much detail as possible. Consideration of various international conditions, the planned deployment schedule, and situations in the deployment area that influence the air movement plan and the method of delivery are included.

b. Based on the requests of the Chiefs of Service, theater, and unified commanders, the Joint Transportation Board acts for the Joint Chiefs of Staff to insure that U.S. Air Force airlift resources are used to achieve the maximum benefit for the national interests. To accomplish this, the Joint Transportation Board may select or alter courses of action to increase the airlift capability or decrease the airlift requirements of a Service, theater, or command. The Joint Transportation Board allocates airlift resources for contingency planning purposes based on the forecast missions and requirements of the Services, theaters, and commands. Unless otherwise directed at the time of the outbreak of war or other emergency, these allocations automatically become effective and supersede existing peacetime allocations.

c. At the direction of the Joint Chiefs of Staff, the U.S. Air Force designates strategic airlift forces to support oprations and contingency plans. The designated airlift force commander, in coordination with the supported Army force commander, is responsible for the development of a detailed air movement plan. The plan includes designation of departure airfields; number and type of aircraft; aircraft flow schedule, loading procedures; air routes and en route stopover points; arrival airfields or, for movements that terminate in a combat assault, the method and points of delivery into the objective area; and procedures for continued support of the assault force.

d. Certain Service responsibilities are fixed by joint regulation, regardless of the nature of the strategic movement. Details of these responsibilities are contained in AR 59–106/AFR 76–7, Operation of Air Force Terminals.

7–13. Support for Administrative Air Movements

a. Logistic and Administrative Assistance. Maximum logistic and administrative assistance is provided to the deploying force from agencies outside the force. For units deploying from CONUS, these services are furnished by the installation commander of the station from which the force is deployed. In oversea areas, the theater commander signates the support agencies.

b. Departure Airfield Control Group. A departure airfield control group (DACG) is organized from elements of the deploying organization that are not immediately required to accompany the deploying force. The mission of this group is to coordinate and control the outloading of the force and to resolve problems of an inter-Service nature which arise. As a minimum, the departure control group should consist of a command section and an operations section. Administrative and support sections are organized as required by the size and scope of the air movement operation. A summary of the organization and functions of the departure airfield control group is contained in FM 57–1.

c. Intermediate Staging Area. An intermediate staging area is a stopover point between the aerial port of origin and the objective area through which the deploying force passes. The purpose of the stopover may be to reconfigure a force deployed administratively into combat formations; regroup aircraft formations; prepare aircraft loads; unite forces drawn from several locations; or provide time for rest, acclimatization, and training of assault forces. To control operations in the intermediate staging area, the Army and Air Force component commanders establish a joint coordinating element composed of an Air Force airlift control element, a departure airfield control group and an arrival airfield control group from the deploying Army force, and an intermediate staging area command. The intermediate staging area command provides administrative and logistic services such as billeting, mess, maintenance, communications, supply, and health services to include assistance in rigging and outloading. Details on the organization and functions of the intermediate staging area command are contained in FM 57–1.

d. Arrival Airfield Control Group. When the strategic deployment terminates at an airfield controlled by friendly forces, an arrival airfield control group (AACG) will be deployed with the advance party to accomplish duties and responsibilities associated with the reception and off-loading of personnel, supplies, and equipment. The organization and the functions of the arrival airfield control group generally parallel those of the departure airfield control group.

e. Airlift Control Element. An ALCE is provided by the Air Force component commander to maintain operational control over airlift units and all airlift aircraft at the departure and arrival airfields. The ALCE is responsible for coordinating all operational aspects of the mission to include aircraft movement control, communications, coordination of onloading and offloading operations, aeromedical evacuation, marshaling of aircraft, and continuous liaison with all agencies to insure that the operation is proceeding according to plan. The ALCE assists the deploying unit with load planning and preparation.

Section IV. BASIC PLANNING CONSIDERATIONS

7–14. Worldwide Capability

All but a few Army units are air portable in the airlift aircraft of today. Although the large-scale deployment of armored and mechanized units by air is not expected, deployment of such units up to brigade size is practicable. This capability, coupled with the prepositioning of certain organizations and equipment in oversea areas, provides the means by which the United States fulfills its commitments to its allies and protects its interests abroad.

7–15. Concepts of Employment

a. The flexibility of an airborne force permits wide latitude in selecting the routes of approach and the area in which the force may be committed. The ability of such forces to move rapidly and to land on or near their objectives enhances the achievement of surprise and facilitates the massing of combat power. The presence of these forces constitutes a threat that affects the enemy's capabilities by compelling him to deploy his combat

power to protect vital installations in his rear areas as well as in the forward combat zone.

b. The primary prerequisites to success in air movement operations are the movement of forces to an objective area without incurring unacceptable losses and the provision to these forces of the required combat power. Measures to attain these objectives include suppression of the enemy's air defense capability and provision of adequate air defense in the marshaling area, en route to the objective area, and in the objective area.

7–16. Ground Combat Operations

Ground combat operations are initiated by an assault consisting of the landing and securing of initial objectives. After consolidation of the objective, the assault force may defend the airhead area; conduct further offensive operations; linkup with other forces; or restage or withdraw to engage in subsequent operations. Offensive operations may be conducted concurrently with the consolidation to secure additional objectives to facilitate future operations. The offensive phase, if undertaken, is initiated as soon as possible after the assault.

7–17. Effects of Nuclear Weapons

a. In a nuclear environment, the use of large airborne forces may be difficult because of the ease with which air movements are detected and the effect of nuclear air defense weapons against aircraft formations. For these reasons, en route air columns and tactical forces in the objective area are dispersed to the maximum consistent with missions and control capabilities. Tactical nuclear attack in the objective area before airborne assault may facilitate control of the area by the assault force. The advantages and disadvantages of this course of action must be carefully considered.

b. To obtain necessary dispersion, a battalion or brigade is usually the largest unit employed in an airhead under threat of, or actual, nuclear conditions. Corps airborne operations in which the bulk of the combat forces is parachuted or airlanded into the objective area will be rare. The success of airborne operations in a nuclear war will, therefore, depend on the ability of brigade or reinforced battalion-size units to conduct effective semi-independent operations.

7–18. Influence of Enemy Armor

When an enemy armored threat exists, armored-defeating weapons and armored units if feasible, should accompany the assault forces. The assault force initially uses close air support and its organic firepower, to include scatterable antitank mines; exploits terrain that limits armor employment; and concentrates antitank mines along avenues of approach.

7–19. Influence of Friendly Forces

Potential assistance from regular forces in the contemplated area of operations must be carefully evaluated. These forces may provide security for the airhead. They may block key approach routes into the objective area or secure vital installations. Once on the objective, U.S. forces can operate in direct concert with such forces. The security of operations involving these types of forces requires special consideration. The success of the operation must be independent of the actions of such forces. Additional assistance from guerrilla or paramiliary forces controlled by the host country or U.S. unconventional warfare organizations may be considered.

7–20. Support Requirements

The limited availability of aircraft requires that only equipment essential to mission accomplishment be moved to the objective area. Ground mobility may be reduced by an initial shortage of organic ground vehicles and, therefore, organic or supporting helicopters should be delivered (flown/airlanded) to the objective area as early as possible. Concerted efforts also are made to capture and exploit enemy supplies; equipment; weapons; vehicles; and petroleum, oils, and lubricants (POL). Long-range fire support in the battle area is provided primarily by close air support and missiles.

7–21. Coordination With Other Forces

All participating forces in an airborne operation must be completely integrated under a single command. Operations must be coordinated with other forces who are operating close to the objective area or whose weapons are capable of firing into the objective area.

7–22. Command, Control, and Communications

The command, control, and communications of the component forces in joint airborne operation are specified by the commander exercising joint con-

trol and supervision over the operation. Considerations in specifying these responsibilities include—

a. The mission and duration of the operation.

b. The functions and capabilities of the units involved.

c. The nature and size of the forces to be furnished by each Service.

d. Capabilities and limitations of available communications system.

e. Organization of the area; geographic location of the operations; and the strengths, dispositions, and capabilities of friendly and enemy forces.

f. The attitudes of the civilian populace and the governmental structure in the objective area.

7–23. Airborne Organizations

a. General. Airborne organizations are specifically equipped and trained to execute assault landings from the air. All equipment organic to these organizations is air portable or airdroppable in Air Force aircraft. Some of the bulky items require disassembly into major components for parachute delivery; therefore, it is preferred to airland this equipment. Airborne organizations include combat, combat support, and combat service support units.

b. Airborne Corps. An airborne corps headquarters is designed to control operations involving two or more airborne divisions. This corps supervises the execution of airborne operations by one or more of its subordinate elements when the entire corps is not employed in the airborne operation. The combat power of the corps may be augmented from elements of other supporting field army units and elements from other Services. These augmentations generally are required in the area of combat service support. The corps may also contain allied units. Airborne divisions in an infantry role require augmentation that will normally be provided to the divisions by assigned field army units attached to the corps. The airborne corps may also control linkup forces and guerrilla units when they fall within its area of operations.

c. Airborne Division. Airborne divisions are the largest units of combined arms and support organized primarily for the execution of airborne assaults. They are specially trained to enter combat by parachute and are capable of landing behind enemy lines in unprepared and defended areas to engage the enemy immediately and effectively.

7–24. Air-Portable Organizations

a. Airmobile Division. The airmobile division can participate in airlanding or in the airlanding phase of an airborne operation. The division's equipment is all air portable in Air Force airlift aircraft; however, certain aircraft require disassembly time which may preclude timely introduction into the objective area. When the distance to the objective and when the enemy air defense means permit, it is preferable to fly organic aircraft into the objective area to avoid partial disassembly.

b. Infantry Division. Most of the infantry division's equipment is air portable in an operational configuration in Air Force airlift aircraft. Exceptions are certain aircraft and heavy engineer bridging equipment, which require partial disassembly that may preclude timely introduction into the objective area. As with the airmobile division, organic aircraft are flown into the airhead if within range and if tactically feasible. The infantry division is well suited to participate in airborne operations in the airlanding role.

c. Armored and Mechanized Divisions. The armored and mechanized divisions do not normally participate in airborne operations because much of their equipment—particularly main battle tanks and self-propelled artillery—cannot be economically air-transported. Armored and mechanized brigades may be deployed with organic equipment for airborne operations if the situation requires and if sufficient aircraft are available. The armored and mechanized divisions are most often employed as the ground linkup force for airborne operations.

7–25. Organization for Joint Airborne Operations

a. Within CONUS, contingency plans established by Joint Chief of Staff direction provide for the conduct of strategic operations involving two or more Services. The unified commands, in response to the Joint Chiefs of Staff approved plans, direct Service component commanders to prepare supporting plans including necessary troop lists. Following completion of the implementing plans including troop lists supporting the Army task organization, the Army component commander passes them to the appropriate unified command

which, in turn, submits them to the Joint Chiefs of Staff for approval. Responsibility for the combat readiness of the troop units assigned in the contingency plans is retained by the parent Service. On receipt of implementation instructions from the Joint Chiefs of Staff, the unified commander issues an initiating directive to the component commander and passes operational command of the troop units to the predesignated joint task force commander.

b. In oversea areas, the theater commander may establish a joint airborne task force or he may direct attachment of one Service to another. The authority establishing the joint force or directing attachment will specify the purpose or mission, the effective date and duration of attachment, and the extent of authority to be exercised by the commanders to which other units are assigned.

7–26. Weather

Means of providing current weather information at departure sites, along approach routes, and in the objective areas are essential. Weather minimums are prescribed for each operation.

Section V. PLANNING AND CONDUCTING AIR MOVEMENTS AND AIRBORNE OPERATIONS

7–27. Procedures

a. Air movement and airborne operations planning is characterized by an inverse sequence of detailed planning and by continuous, close joint coordination. Specified procedures are outlined in FM 57–1, FM 61–100, and FM 100–27.

b. An air movement operation requires data on the mission of the airlifted force, availability of airlift, aircraft capabilities, departure area, special measures required to safeguard the security of the operation, and combat intelligence. From the time an operation is announced until it is completed or abandoned, coordination, briefings, and conferences between parallel echelons of Air Force and Army units are continuous. Both Services must agree on each operational detail before initiating operations. Points on which agreement cannot be reached are referred to the unified/joint force commander for resolution.

7–28. Planning Responsibility and Coordination

a. A senior headquarters considers many airborne operations and assigns planning responsibility for certain operations to subordinate headquarters. To assist participating and planning headquarters in developing plans concurrently, to reduce planning time, and to insure coordination, the senior headquarters issues planning directives that contain operational information, intelligence, weather information, and necessary combat support and combat service support information. The command charged with executing the specific operation develops the detailed plans. Aircraft requirements and the availability of aircraft must be determined as soon as possible. Communications security measures to be observed must be carefully considered during the planning phase.

b. In a division-size joint airborne operation, the division and corps headquarters must exchange liaison personnel to insure coordination and complete integration of all plans. The size, duration, and complexity of the airborne operation will determine the size of the liaison element from each headquarters.

c. In airborne operations, inter-Service coordination must provide a clear understanding of marshaling procedures, the air movement requirements, the concept of operations in the objective area, and the procedures for supply by air. Coordination between Army forces and units providing the airlift must be initiated early in the planning phase and must be continuous.

d. Plans for airborne operations that require detailed joint coordination include, as a minimum, the air movement plan and the marshaling plan.

7–29. The Ground Tactical Plan

a. The ground tactical plan forms the basis for all other plans. The assigned mission is translated into objectives, the early control, destruction, or neutralization of which is required to accomplish the mission.

b. In an airborne operation, there may be multiple airheads in the objective area. In selecting the airhead or objective area, consideration is given to enemy capabilities, particularly the nuclear capability and the probability of its use.

c. The ground tactical plan includes a determination of the strength, composition, and deploy-

ment of the forces required to accomplish early securing and defense of the objective area. The ground tactical plan must be logistically feasible.

d. The ground tactical plan includes an analysis of the capabilities of friendly guerrilla forces in the area that could assist in accomplishing the operation.

e. Based on the ground tactical plan, the force commander prescribes priority of movement and phasing of units into the objective area.

7–30. The Landing Plan

Based on the requirements of the ground tactical plan, the landing plan is developed to indicate the method, sequence, and place of arrival of troops and materiel in the objective area. Landing areas should be of sufficient number and size to accommodate the forces involved, reduce their vulnerability, and position them to execute the ground tactical plan.

7–31. The Air Movement Plan

The air movement plan phases the force into the objective area in the sequence determined by the Army airborne force commander. The plan prescribes the use and allocation of aircraft and related facilities to meet the requirements of the force commander within technical and tactical limitations. Specific aircraft loads are developed during air movement planning and are included in the air loading tables that may be appended to the air movement plan. This plan begins with the loading of the airlift aircraft and ends with the delivery of units to their objective areas. The air movement plan is prepared jointly and is approved by the joint force commander.

7–32. The Marshaling Plan

The marshaling plan is based on the air movement plan. This plan schedules the movement of units of the airlifted force to departure airfields. It delineates responsibility for providing facilities and services while units are marshaling in dispersed areas, and it includes plans for loading aircraft and briefing troops for the forthcoming operations. This plan is also jointly prepared and approved.

7–33. Subsequent Operational Planning

The ground tactical plan will include actions to be taken after initial objectives are secured. Typical missions include the securing of areas from which subsequent operations will be launched, conducting an exploitation from the airhead, conducting harassing and interdiction operations, reinforcing units beyond the reach of surface means, linking up with advancing forward elements, and withdrawing.

7–34. The Airborne Assault

Airborne operations are normally initiated by an assault phase, during which units may be committed under decentralized control until initial objectives are secured. Depending on the terrain and the enemy situation, the airborne assault is normally executed by the parachute delivery and assault landing of forces into the objective area. Normally, airlandings, as opposed to assault landings, are conducted in projected areas or areas free of the enemy.

7–35. The Securing and Organization of Objectives

The securing of assault objectives, organization of the airhead, offensive operations in the objective area, and establishment of security are initiated during the early part of the assault phase to capitalize on the elements of surprise and shock effect inherent in the air-delivered assault. The degree to which the objective area is occupied and organized for defense is determined by the mission, the type of airborne operation being conducted, enemy capabilities, and the characteristics of the area of operations and planned subsequent actions. The buildup in the objective area proceeds concurrently with its securing and organization. The extent of buildup will depend on the enemy situation and plans for linkup or withdrawal of the committed units. Airborne operations may be entirely offensive in nature and may require no securing or defense of an airhead, as in multiple independent attacks or raids that culminate in immediate withdrawal. This type of action requires a high degree of air and ground firepower, accurate and timely intelligence, and mobility.

7–36. Dispositions in the Objective Area

a. Forces in the objective area normally are disposed for defense of key terrain and are disposed to reduce vulnerability to air and nuclear attack. Multiple defensive positions are organized to cover the main routes of approach. Avenues of approach and gaps between defensive positions are covered by nuclear and other fires; small ground and aerial combat detachments; antitank weapons; and, when available, armor. Natural obstacles are exploited in the defense. Tactical

air reconnaissance, air surveillance, and ground reconnaissance provide information on enemy operations. Reserves are held in readiness in central locations to facilitate their rapid movement within the airhead and are positioned to add depth to the defense against the most threatened area. The reserve may be reinforced by units from forces not heavily engaged.

b. Rocket, missile, and air support is used in long-range interdiction missions to destroy or delay enemy reinforcements. The airborne force must have immediately responsive air support—

(1) To provide air reconnaissance to detect and report enemy activities that may affect the force.

(2) To perform close air support missions to defeat enemy targets in the battle area.

(3) To perform counterair operations to maintain air superiority over the areas occupied by the force.

c. Friendly forces operating in the objective area can assist the airborne force by interdicting enemy movement in and near the objective area; attacking enemy command, control, communications, and supply installations; and executing supporting attacks and deception plans. These forces also assist in evasion and escape; selecting, marking, and securing drop and landing zones; and collecting information. Although assistance from these forces is integrated into tactical planning, to include alternate plans, the successful execution of primary and alternate plans is not made contingent on their assistance.

7–37. Withdrawal

For all airborne operations, plans for withdrawal are prepared before initiating the operation. These plans necessarily include use of any available air, land, and sea transport means. Withdrawal from the objective area may be as planned, or it may be forced by the enemy.

7–38. Linkup

a. When a linkup between an airborne force and other friendly forces is planned, detailed coordination between the forces is essential. Provision must be made for linkup points, command and staff liaison, assumption of command, a system of mutual recognition and identification, early radio contact to establish forward positions, fire support, coordination measures, and actions following linkup.

b. Upon linkup, command of the Army element of an airborne force normally passes to the senior ground commander in whose zone the element is operating, providing he is able to control, support, or influence the action of the force.

Section VI. COMBAT SERVICE SUPPORT FOR AIRBORNE OPERATIONS

7–39. General

Combat service support is essential to any combat operation. The problems normally inherent in providing combat service support are magnified in an airborne operation by the displacement of forces and the limitations of airlines of communications. To deal adequately with these increased problems, planning for resupply, maintenance of equipment, evacuation of casualties, and handling of prisoners of war must be emphasized. Details on combat service support for airborne operations are contained in FM 8–15, FM 54–2, FM 57–1, FM 61–100, and FM 100–10.

7–40. Supply

Concurrent with tactical planning, consideration is given to the provision of all supplies and equipment required to accomplish the mission. The quantities and types of supplies and equipment carried by assault forces in airborne operations are dictated by initial combat requirements. Care must be exercised to insure that only those supplies required to satisfy the immediate needs of the force are delivered initially into the objective area because excess supplies and equipment constitute a burden to the force. Provision must be made to establish and maintain required levels of supply in the objective area. This is done by phasing supplies into the objective area on an accompanying, followup (automatic and on-call), and routine basis. In airborne operations, ammunition and POL products normally constitute the major tonnage items.

7–41. Maintenance

The problem of maintenance in airborne operations is magnified by the relatively few maintenance personnel in the objective area and by the damage to equipment that may occur during air delivery. To reduce requirements, operator maintenance must be emphasized and intensive mainte-

nance must be performed before departure to insure the highest standard of operational readiness of all equipment entering the objective area. The planned duration of the operation will affect maintenance planning. Maintenance requirements in short-duration operations may be largely satisfied by preoperational efforts, to include replacement of nonreparable equipment. However, for operations of longer duration, plans must include provision for maintenance personnel or units in the objective area. Major equipment items may be evacuated from the objective area to maintenance facilities, provided suitable landing areas and the required aircraft are available.

7–42. Transportation

Since transportation within the airborne objective area is normally limited, air delivery of supplies direct to the user is accomplished where possible. Maximum use is made of captured enemy vehicles to supplement limited transportation resources.

7–43. Evacuation

Evacuation by air, using the return airlift capability of assault and resupply aircraft, is normal in airborne operations. The sick and wounded, prisoners of war, selected indigenous personnel, captured enemy materiel, and damaged equipment are evacuated from the objective area in accordance with plans and as the situation requires. Evacuation of casualties from the objective area normally takes precedence over all other evacuation requirements. For details on Army and Air Force evacuation responsibilities, see FM 57–1 and FM 100–27.