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CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

22 January 1974

MEMORANDUM FOR: The Director of Central Intelligence

SUBJECT : MILITARY THOUGHT (USSR): The Organization of Defense in Conventional Warfare

1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". This article advances the thesis that Soviet forces may find it necessary, even desirable, under certain conditions to carry out defensive operations. While the author asserts that nuclear warfare is most likely, he presents his case in terms of the non-nuclear combat phase which he expects to precede nuclear warfare. He gives the dimensions of sectors in which various units will be required to conduct a defense, and the mix of weapons which he considers most advantageous. This article appeared in Issue No.3 (91) for 1970.

2. Because the source of this report is extremely sensitive, this document should be handled on a strict need-to-know basis within recipient agencies.

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William E. Nelson
Deputy Director for Operations

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Intelligence Information Special Report

DIRECTORATE OF OPERATIONS

COUNTRY USSR

[redacted]

DATE OF INFO. Late 1970

DATE 22 January 1974

SUBJECT

MILITARY THOUGHT (USSR): Defense of Troops Without the Use of Nuclear Weapons

SOURCE Documentary

Summary:

The following report is a translation from Russian of an article which appeared in issue No. 3 (91) for 1970 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". The author of this article is Colonel I. Lyutov. This article advances the thesis that Soviet forces may find it necessary, even desirable, under certain conditions to carry out defensive operations. While the author asserts that nuclear warfare is most likely, he presents his case in terms of the non-nuclear combat phase which he expects to precede nuclear warfare. He gives the dimensions of sectors in which various units will be required to conduct a defense, and the mix of weapons which he considers most advantageous.

End of Summary

[redacted] Comment:

Col. I. Lyutov and A. Sosnin wrote an article in Red Star, 15 Dec. 1962 entitled "In Cooperation with Scientists." In July 1966, the author wrote "Some Questions of Defense Without the Use of Nuclear Weapons" for the RESTRICTED version of Military Thought. Military Thought has been published by the USSR Ministry of Defense in three versions in the past -- TOP SECRET, SECRET, and RESTRICTED. There is no information as to whether or not the TOP SECRET version continues to be published. The SECRET version is published three times annually and is distributed down to the level of division commander.

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Defense of Troops Without the Use of Nuclear Weapons

by

Colonel I. Lyutov, Candidate of Military Sciences, Docent

In our army, as in the armies of our probable enemies, primary attention is being devoted to the development of a theory for conducting nuclear war. A future world war will most probably assume the character of general nuclear warfare. However, we cannot dismiss the possibility that the war may begin and go on for some time without the use of the means of mass destruction.

The basic form of troop combat operations in the non-nuclear period is the offensive, but there will also be defensive operations. Defensive operations of various dimensions may be conducted in any of the theaters of military operations where, because of local conditions or socio-political considerations or for other reasons, offensive operations appear impossible or inadvisable.

Defensive operations will be necessary for covering the advance and deployment of groupings of armies and fronts on the offensive, since it will take longer, using conventional means, to create the necessary groupings of forces and means and to organize an attack on the enemy than it would if nuclear weapons were used. In many instances a defensive operation will be mounted in order to save forces and means to support an offensive on other, more important, axes. We must conduct such operations when the enemy gains superiority of forces and assumes the offensive.

Our troops may have to go on the defensive during offensive operations because of lack of success in meeting engagements and battles, or in order to repulse counterstrikes by enemy operating reserves. This may happen particularly when the enemy is expected to resort to the limited or unlimited use of nuclear weapons during counterstrikes.

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Troops may also go on the defensive after completing offensive operations if they cannot proceed immediately to the next offensive operation because of personnel losses and lack of materiel (principally ammunition and POL supplies).

Finally, it may be planned in advance for troops to go on the defensive before or during combat operations in the coastal areas of seas and oceans where large-scale amphibious and airborne landings may be expected.

The type of defense under discussion may be engaged in on the scale of army formations as well as large units. However, if the enemy succeeds in creating superiority in the forces and means needed to penetrate the zone of one of our fronts, or if he succeeds in inflicting significant losses on the troops of a front by going over to nuclear actions, then defensive measures may be applied on the scale of a front.

Training exercises of the US central group of armies in Europe indicate that in non-nuclear offensive operations, a US field army was assigned a zone 180 to 300 kilometers wide, and the field armies of the other NATO countries were assigned zones 100 to 200 kilometers wide. An army corps of a US army had a zone 40 to 80 kilometers wide, a West German army corps had one 50 to 60 kilometers wide, and a British army corps had one 40 to 60 kilometers wide. The first echelon of a field army includes two to four army corps, which in turn usually have two or three divisions in the first echelon.

According to American views, field armies mount strikes along two or three axes, on each of which there is an army corps of three or four divisions. In conducting a non-nuclear offensive, army corps and even divisions create a high density of conventional weapons, primarily artillery, tanks, and aviation along the axes of their strikes, in order to achieve overwhelming superiority in forces and means over the defending troops in the breakthrough sectors. The breakthrough of our defenses is to be completed by all the forces of the various army corps of the first echelon.

Consequently, the major objective of our defenses must be to inflict maximum losses on all the corps of the enemy first echelon and to repulse their attacks. Proceeding from this, the goal of an army defensive operation in which

nuclear weapons are not used will be to inflict significant losses on superior enemy forces, repulse his attacks, hold important areas, and create favorable conditions for assuming a decisive offensive.

In addition, defensive actions may be necessary to cover the advance and deployment of offensive groupings in a border zone, to protect the flanks and rear of the advancing groupings of an army or a front, to fortify lines reached during offensive operations, and to create conditions for the preparation of the next advance.

What are the characteristic traits of such a defense and what sort of demands are made on them?

It has been shown by research and by experience gained in training exercises that, despite the significant qualitative and quantitative growth of conventional means of warfare, the combat capabilities of army formations are not adequate for the decisive defeat of enemy troops located in the operational depth or those moving out to attack from the march; nor are they adequate for the disruption of an offensive during its preparation. Therefore, in a non-nuclear war, enemy strikes can be repulsed and his offensive disrupted only by committing large units and units to combat. Under these conditions, and as it was during the last war, defensive engagements will be distinguished by exceptionally bitter and stubborn combat against superior enemy forces in order to hold occupied areas and lines, since it takes a considerable amount of time and the most effective exploitation of favorable terrain conditions to mount strikes against an advancing enemy if only conventional means are used.

A characteristic trait of a defense in which only conventional means of destruction are used is that the troops will be conducting combat actions under the constant threat of the employment of nuclear and chemical weapons by the enemy. This makes it necessary to maintain our rocket troops and aviation at a high level of readiness for mounting nuclear strikes, and our combined-arms large units ready to conduct combat operations under nuclear conditions.

The constant threat of enemy strikes using means of mass destruction requires skilful deployment of troops. Combat operations by defending large units will develop in wide zones along the axes of attack of the principal enemy groupings and at different depths simultaneously. Army troops will be obliged to concentrate their main forces and create relatively great densities of combat weapons.

The nature of a modern defensive operation using only conventional means of destruction places increased demands on defense. It must withstand massive strikes by the many different types of modern conventional means of destruction of enemy ground troops and aviation; it must mount increasing counteraction against the strikes of enemy groupings; and it must remain aggressive and stable.

Defensive operations in the non-nuclear period of a war will take the form of bitter combat with enemy large units having a great quantity of tanks and other armored equipment. This enables the enemy to create high operational and tactical densities along the main axes, reaching respectively 100 units and 25 to 30 units, and even more, per kilometer of front. It is therefore important that our defense be capable of withstanding a strike by such an armored tank grouping. Antitank defenses along the main axes must be created to the full depth of the operational disposition of the army. These defenses will be essentially different from those of World War II. As is well known, all areas, sectors, and zones of defense of units and large units located along axes threatened by tanks were equipped for antitank actions in that war. A large quantity of antitank weapons was concentrated on each kilometer of the front along such axes, which assured our success in combat with enemy tanks.

Under modern conditions, new weapons for antitank combat, especially highly mobile antitank missiles (including some mounted on helicopters) with excellent combat characteristics, are appreciably facilitating the solution of the problem of providing antitank defense without advance concentration of weapons in antitank areas. Antitank defense must therefore be based above all on the broad mobility of antitank means, massive fire of all types, and the erection of engineer obstacles along axes threatened by tanks to the full depth of the operational disposition of the army. To accomplish all of this requires (in contrast

to defense under the conditions of a nuclear war) that we have not one but two, highly mobile and powerful antitank reserves in each army and division, to conduct operations over a wide zone and to reinforce antitank defenses on any axis.

In order to mount strikes against the troops of our army engaged in defensive operations, especially against groupings repulsing strikes on the main axis, and in order to render direct air support, the enemy will make massive use of tactical aviation; training exercises indicate that he will expend 35 to 43 percent of his aircraft sorties for this purpose but not over 10 percent in a nuclear war. The NATO command considers that 5 or 6 air wings should be allotted for the direct air support of a field army. We can judge the degree of intensity of air activity from the "Pyramid of Power 2" training exercise (1965), during which there were 1100 aircraft sorties in four days in support of troops of the US Seventh Field Army.

Still another reason why air defense is most important for our overall defense system is that the large number of tactical aircraft possessed by the enemy are his principal means of delivering napalm, whose effectiveness against strongpoints held by defending troops can be very devastating. And this entails painstaking work in organizing the combat actions not only of army and division air defense resources but particularly the resources of regiments and battalions, since the combined-arms commanders at these levels do not yet have adequate experience in their use.

Analysis of the capabilities of attacking enemy groupings shows that the enemy can, in conducting powerful preparatory fire along the main axes, create high densities of artillery, reaching 100 to 150 guns and mortars per kilometer of the front. Therefore, our defense must maintain its stability in the face of massive artillery fire which will usually include incendiary ammunition.

At the same time, the capability of a defense conducted only with conventional means to withstand artillery fire, and especially nuclear weapons if they are used, depends to a large extent on the uninterrupted conduct of combat with enemy means of nuclear attack and his artillery and mortars.

At the present time, our probable enemy has great capabilities for using toxic agents with psychogenic and irritant effects, as well as incendiary and smoke weapons, to paralyze the combat operations of defending troops, disorganize the control and activity of the rear, and undermine troop morale. Prolonged exposure along these lines may compel the troops to move to other positions. In preparing defenses, therefore, these factors must be taken into account and the troops prepared for extended operations under exposure to chemical weapons.

In modern defense, increasing importance is being attached to combat against airborne landings, airmobile troops, and sabotage-reconnaissance groups. For example, one army corps can simultaneously land up to two motorized infantry battalions within the depth of our defense and can repeat the landing of similar forces two or three times during a twenty-four hour period. In addition, airmobile troops and 30 to 60 sabotage-reconnaissance groups may operate in the defense zone of an army. Success in combat with enemy airborne landings and sabotage-reconnaissance groups will make it possible to preserve the freedom of action of our reserves, the stability of control, and the uninterrupted work of our rear; and it will also prevent the enemy from conducting reconnaissance. Combat with these enemy forces must therefore be conducted by all troops of both the first and second echelons. Our artillery must be ready to deliver concentrated fire against airborne forces which have landed. Aviation may also be used for this purpose. It also becomes necessary to create, in armies and divisions, special anti-landing reserves possessing high mobility and fire power, in order to quickly destroy the enemy forces in their landing areas. Further research is required concerning the composition of these reserves. In our opinion, the anti-landing reserve of an army may be assigned a motorized rifle regiment; and that of a division, a reinforced motorized rifle battalion.

We also consider that the principal need for our defense is that it be anti-nuclear, which, in turn exerts decisive influence on the structure and conduct of defense; this need stems from the constant threat that the enemy may use nuclear weapons. For this purpose we must now settle on a level of dispersal of the combat dispositions of large units, units, and subunits, and must assign to each army and

its component large units the same zones which would be assigned under the conditions of a nuclear war.

The dispersal of combat dispositions of troops, and of elements of the operational makeup of an army engaged in defense, will most likely be the guiding principle in determining the defense structure, even under the conditions being discussed. However, along the probable axes of the enemy offensive, where the enemy will be compelled to create powerful groupings in order to achieve superiority in forces and means, we must have more compact deployment of the combat dispositions of defending troops and increased density of fire, especially antitank fire. In this case, the second echelons and reserves must be dispersed. It is advisable to locate them at some depth where they cannot be struck by tactical rockets or by fire from the main mass of enemy artillery. In addition, the areas of deployment of the second echelons and the reserves must be chosen so that, upon commitment to the engagement, units and large units will not have to be relocated along the front line. These requirements for deploying the second echelons and the reserves may be met by locating the second echelon of an army 60 to 70 kilometers from the FEBA and that of a division 15 to 20 kilometers from it. The highly mobile capabilities of modern large units make it possible for second echelons and reserves to move out quickly to threatened axes.

Thus, a defense in the non-nuclear period must be anti-nuclear, anti-tank, anti-air, anti-artillery, anti-chemical and anti-landing.

Stability and aggressiveness in defense under non-nuclear conditions are achieved through deep echeloning and dispersal of forces and means; careful planning of fire for all types of weapons; engineer preparation of the terrain and the exploitation of all strong defensive positions; decisive concentration of forces along the most important axes by executing bold troop movements; and timely counterattacks and the mounting of counterstrikes.

The deep echeloning of forces and weapons, and their dispersed deployment in the area of combat operations, taking into account the possible use of nuclear weapons, must be provided for by the creation of a series of frontal and alternate zones, positions, and lines. It is therefore

advisable, just as under nuclear conditions, to create an army security zone from 15 to 50 kilometers deep* within the defense zone of the army, a defense zone with an overall depth of up to 30 kilometers within the tactical zone, one or two army zones of up to 20 kilometers in width for each, and an alternate army zone. The overall depth of an army defense may reach 100 to 150 kilometers.

An enemy attacking without nuclear weapons will be compelled to mass his forces and means along the strike axes in order to assure decisive superiority and defeat the defending troops. Taking this into account, we must, in creating groupings of army forces and combat dispositions of large units, clearly designate the concentration of main forces along the axes of probable enemy strikes.

During World War II, not only were main axes designated for defense but also sectors of terrain for whose retention the defending troops concentrated their main efforts. This also applies to the conditions under discussion. In order to achieve this, during the preparation of an army defensive operation it is necessary to designate a main defense zone for the army; principal defensive positions within the defense zones of divisions; battalion defense areas within the regimental defense sectors; and main strongpoints within the battalion defense areas.

However, we must take into account the fundamental difference between the composition of the troops who conducted a defense in a main defense zone during World War II and the forces which will create a main defense zone under the conditions being discussed. Previously, a zone was set up and occupied by the main forces, usually in advance, and it remained the main zone throughout most of the operation. Under present conditions, the principal troop grouping assigned to defend the main zone must, considering the threat of nuclear attack, be created immediately before the beginning, or during, the enemy attack, after the main strike axis has been established; and it must be formed by moving up troops, forces, and weapons.

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* General-Leytenant V. Petrenko, "The Use of a Security Zone in Defense", Collection of Articles of the Journal "Military Thought", 1969, No. 1 (86).

Depending on the plan of the defensive operation (battle), the first zone, or one of those being created in the depth, may be chosen as the main zone (principal position). If there is a security zone (forward position), then in our opinion it is advisable to choose the first defense zone as the main zone; a large portion of our troops must be deployed within its limits, which will enable us to use a considerable quantity of our fire weapons in repulsing an enemy attack.

In combat for main positions and areas, units and large units must also commit their main forces and weapons and must be prepared to carry out counterattacks.

For several years, theoretical works and manuals have been inveighing against the creation of a continuous front in a defense.* We consider this a just position for a nuclear period, but it cannot be applied to conditions of non-nuclear warfare. Our defenses along the axes of advance of enemy strike groupings must be not only deep but continuous as well. Our understanding of a continuous front in defense under the conditions being discussed here is one in which the combat formations of subunits and units are deployed so that the intervals between company strongpoints and battalion defense areas are covered by the fire of tanks and the main antitank means located in adjoining strongpoints and in our depth.

Troops defending on a normal front must set up a continuous front, especially along important axes. In this connection, we consider it advisable to revive the concepts "defense on a normal front" and "defense on a broad front". In defense on a normal front, an army with three or four divisions in its first echelon can have a zone 100 to 150 kilometers wide and 100 to 150 kilometers deep; a division can have a zone 20 to 30 kilometers along the front and 20 to 30 kilometers deep; a regiment can have a sector 7 to 10 kilometers wide and 7 to 10 kilometers deep; and a battalion can have an area 3 to 5 kilometers wide and 2 kilometers deep.

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* Combined-Arms Combat in Nuclear Warfare, published by the Military Academy i/n M. V. Frunze, 1965, page 183; General Tactics, M., Military Publishing House, 1967, page 439; General-Polkovnik of Tank Troops M. Nikitin, Current Demands on the Field Service Regulations", Collection of Articles of the Journal "Military Thought", 1969, No. 2 (87).

These estimates are justified by the following.

In a division defense zone 25 kilometers wide, for example, we might expect a strike by up to 1.5 to 2 divisions of the West German army, numbering about 450 to 500 tanks. Two-thirds of this number (300 to 350 tanks) may be in the first echelon. In order to withstand the strike of such a tank grouping, the defense system must be deeply echeloned and must consist of several positions, the first of which should have most of the antitank weapons.

Consequently, depending on the width of the front, each division must set up 4 or 5 battalion defense areas at its first position, each area having up to 33 organic antitank weapons. If 3 or 4 tank companies and antitank batteries are assigned to reinforce these battalions, the total number of antitank weapons at the position will be 160 to 200. Besides this, the capabilities of a division for combat against tanks may be increased by moving up the tanks of the antitank reserves of regiments to their firing lines, by conducting artillery fire from indirect firing positions, and by constructing a system of engineer obstacles; in this way, the division will be able to engage in combat with 240 to 280 (or not less than eighty percent of the total) of the enemy tanks advancing in the first echelon, which may be considered fully adequate for repulsing their attack.

Thus, under non-nuclear conditions, defense zones assigned to large units of the first echelon may be the same as those in nuclear combat operations.

The assignment of zones of this width to an army and to divisions will enable them to disperse the elements of their operational composition (combat order) and assure the stability of antitank defenses.

In our opinion, defense on a broad front can be applied to secondary axes and to areas which are not everywhere accessible to enemy troops, and to situations in which there is a shortage of forces and means. It must be based on rapid and effective shift of fire, fire means, troops, and obstacles, and on the holding of individual areas which intersect the most important axes, coupled with counterattacks from the depth.

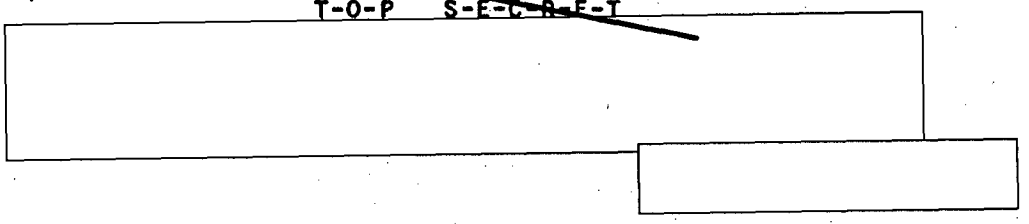
In defense on a broad front, an army may, depending on terrain conditions and the importance of the axis, be assigned a zone extending more than 150 kilometers along the front, with a 50 kilometer zone for a division and a 20 kilometer sector along the front for a regiment.

The nature of the defense structure will depend largely on the conditions under which troops assume the defensive. In principle, however, a defense structure may be considered complete only after the creation of the appropriate groupings has been completed, the fire of all types of weapons has been organized, the shift of fire forces, and weapons has been prepared, and the necessary work has been carried out for the engineer preparation of the areas of terrain being occupied by our troops. Undoubtedly, the last requirement is very difficult to fulfil when assuming the defensive during an offensive. Under these conditions, in order to assure that our troops occupy the designated areas, we must devote our main attention to the skilful use of fire by tanks in the combat dispositions of the first echelon, of engineering barriers, and of favorable terrain conditions.

Whatever may be the circumstances of assuming the defensive, means must first exclude the possibility of a breakthrough by large enemy forces along the axes of his strikes, and, second, provide for the economical use of forces and means so that when necessary, they can be regrouped rapidly to create the needed superiority in threatened sectors of the front.

All of the known elements of an operational structure retain their importance in non-nuclear defensive operations: the first echelon, the second echelon (reserve), groupings of artillery, rocket troops, and air defense troops, and reserves for various purposes.

In assuming the defensive during an offensive, or because of the unsuccessful outcome of a meeting engagement, a troop grouping which is still in the initial stage of being organized may often not conform to the concept of a defensive operation: the first echelons at this time may have operating within them tank divisions and regiments which are subsequently to be used as the basis of a grouping for counterstrikes (counterattack); and motorized rifle



divisions will conduct combat actions along unconnected axes, with some of them located in the second echelon and advancing behind the first. All of this necessitates regroupings. It goes without saying that they can be completed only after the first attacks of the enemy have been repulsed, and without his knowledge.

An artillery grouping of an army may include an army artillery group of four to six artillery battalions, one or two antitank reserves, and groupings of artillery large units. It is advisable to divide an army artillery group into sub-groups for supporting the divisions defending along the main axis. The reason for having an army artillery group of this composition and for dividing it into sub-groups is as follows. The enemy may mount at least two strikes within the defense zone of an army. The divisions defending along these axes are usually at an appreciable distance from one another and will require army artillery support. An army artillery group can successfully fulfil this task if its sub-groups are near the zones of the defending divisions; this will create favorable conditions for massing fire before the defense front. The composition of each sub-group may include two to four battalions as the minimal reserve of artillery of an army.

Considering that an army engaged in defensive operations receives a broad mission, it is necessary, in our opinion, to include, in addition to the usual engineer equipment, one flight each of MI-4 and MI-6 helicopters and up to one sapper company with the necessary amount of antitank mines, in order to carry out a move of mobile obstacle detachments. Temporary supply dumps of antitank and anti-personnel mines can be set up to support the operations of mobile obstacle detachments along the probable axes of enemy strikes.

A few words about the combat use of aviation. In non-nuclear defensive operations, it becomes the principal means for the reconnaissance and destruction of enemy nuclear weapons, and for strikes against enemy groupings located beyond the range of our artillery fire. A significant part of the aviation resources assigned to support an army will obviously be used in counterpreparation and the delivery of counterstrikes. According to the experience gained in training exercises and war games, during defensive operations an army should be given up to

five or six regimental flights of fighter-bombers for day operations and one or two regimental flights of front bombers for operations at night and under complex weather conditions.

However, in fulfilling these objectives, aviation operations can be exposed to a strong enemy air defense system. Although in nuclear war, combat against air defense means is facilitated through nuclear strikes on them by our rocket troops, under non-nuclear conditions the overcoming of enemy air defenses by our aviation becomes a complex problem. Thus, the neutralization of enemy air defenses must be one of the important objectives of defending troops.

In a defense in which only conventional means of destruction are employed, the organized use of fire of all types assumes a significantly greater role. We consider that the creation of a zone of massed fire, especially antitank fire, before the entire defensive front of armies and divisions is a difficult task connected with widening the zone of their combat operations. Thus, zones of massed fire will be created for the most part only along the most important axes which are threatened by tanks. An increase in the density or concentration of fire along new axes during an operation can be effected by a shift of fire or by the fire means of the first echelon.

Let us dwell on some problems in conducting a defense. Defending troops must be highly aggressive and must strive to inflict the maximum destruction on the enemy starting with the distant approaches.

Proceeding from the fact that the enemy may, in attacking within the defense zone of an army, use several groupings, each with an average composition of 1.5 to 2 army corps, our defending troops will have deployed in front of them a large number of guided missile and free-flight rocket launchers, tank and motorized infantry battalions, battalions of field artillery and antitank means and radiotechnical stations. A large portion of these means are in the divisions of the enemy first echelon and are deployed to a depth of 15 to 20 kilometers. Thus, with the approach of the main enemy grouping toward the forward edge, favorable conditions are created for striking it with counter-preparation fire, particularly if we have been able to go onto the defensive in advance.

The capabilities of the conventional means of destruction of an army permit it to conduct artillery counter-preparation fire against the main enemy grouping, usually in accord with one of the planned variants for one axis. The counter-preparation front must be delimited in such a way as to assure the minimum artillery density (40 to 50 pieces for one kilometer of front) necessary to destroy the most important targets. The area of counter-preparation will usually extend for 10 to 12 kilometers* along the front, and as far into the depth as the range of the main means of destruction.

Calculations show that, along the axis of the main enemy strike, an army can be allotted 23 or 24 artillery battalions and 3 or 4 tank battalions for conducting counter-preparation fire, which will amount to 520 guns, mortars, and tanks. This will permit counter-preparation fire with an average density of up to 52 guns, mortars, and tanks for one kilometer of front. Such a quantity of fire means provides the capability for simultaneously striking 10 to 12 battalions, and neutralizing up to 22 artillery and mortar batteries and 2 or 3 control posts.

In order to speed up the preparedness of artillery and to improve its control in conducting counter-preparation fire, we consider it advisable to use the artillery grouping of large units and units which already exists in the defense system, reinforcing it from second echelons and reserves. In doing this we must give due consideration to the necessity for returning this artillery to its own large units and units after completion of their counter-preparation fire missions, after the enemy offensive has already begun.

Action against the attacking enemy groupings up to the moment the attack begins will be carried out not only by counter-preparation fire but also through subsequent massive strikes by all our fire means to the full limits of their range. Counter-preparation fire must indeed become one of the component parts of the overall system of measures taken

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* Troop Combat Operations Without the Use of Nuclear Weapons, published by the Military Academy i/n M. V. Frunze, 1968.

by an army for combat with the main enemy grouping during the advance and deployment of the latter.

One of the ways of raising the effectiveness of counter-preparation can be the large-scale use of incendiary munitions; and if the enemy uses chemical weapons, large-scale use can be made of irritant and psychogenic toxic agents, by both artillery and aviation, all these actions to be taken in combination with the laying of mixed minefields along the routes of advance of the main enemy grouping.

The achievement of the objectives of a defensive operation will depend to a large extent on the capabilities for mounting an army counterstrike against the enemy who has driven a wedge into our defenses. A division of the second echelon will be the basic element of the grouping designated to deliver the army counterstrike. To reinforce this division, the second echelons of divisions may be used, as well as first-echelon units from sectors which are not under attack.

It is advisable to draw upon the following for preparatory fire and support of a counterstrike: army artillery; artillery of the first-echelon divisions in whose zones the counterstrike is taking place; artillery taken from passive sectors; and aviation. The divisions participating in the counterstrike will advance in a zone of up to 10 kilometers.

The depth and nature of combat objectives will depend on the makeup of the attacking enemy grouping and on the depth of its penetration into our defenses.

It is advisable to conduct an army counterstrike while engaging in combat for the defense zone of large units of the first echelon. A counterstrike may also be mounted during an enemy breakthrough into our operational depth, as well as against a large airborne landing in the army zone. In the latter case, the composition of the counterstrike grouping may be somewhat smaller.

The objective of a counterstrike in non-nuclear conditions may be to rout the attacking enemy grouping; to capture important lines and areas which had been lost; and to create conditions for the continuation of a stubborn and

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aggressive defense, for the assumption of a decisive offensive, or for the mounting of a counterstrike by reserves of the front.

When an army counterstrike appears inadvisable because of the situation, large units of the second echelon will occupy defensive positions along a prepared line. During an operation the army commander will take measures for strengthening defenses along the enemy strike axes. In order to accomplish this, there may be restructuring of the combat makeup of second-echelon divisions, and it will depend on the nature of enemy operations. If necessary, a procedure will be established for withdrawing troops from large units of the first echelon and moving them to newly-designated lines.

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