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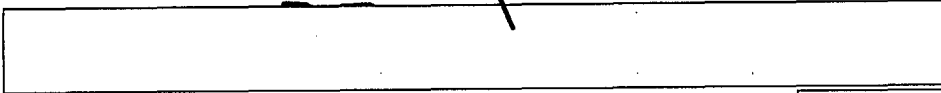
22 December 1978

MEMORANDUM FOR: The Director of Central Intelligence
FROM : John N. McMahon
Deputy Director for Operations
SUBJECT : MILITARY THOUGHT (USSR): Certain
Problems of Modern Defense

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 three-part article is a review of an article written by General-Mayor V. Petrenko. The first section discusses the influence of nuclear weapons and other new combat means on modern defense. The second briefly discusses the nature of modern defense and emphasizes that defense will play an important role even in modern operations. The last section discusses radioactive contamination and what bearing it has on organizing defense. A method of calculating the radiation dose that personnel have received is also presented in this section. This article appeared in Issue No. 3 (64) for 1962.

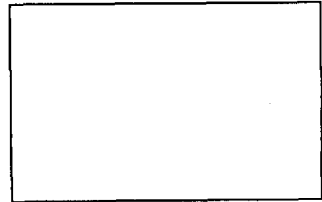
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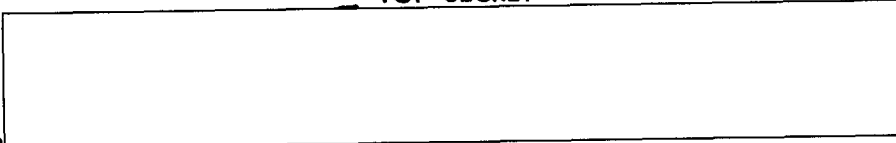
for John N. McMahon



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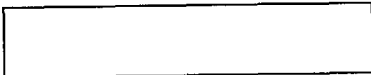




Intelligence Information Special Report

Page 3 of 17 Pages

COUNTRY USSR



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SUBJECT

MILITARY THOUGHT (USSR): Certain Problems of Modern Defense

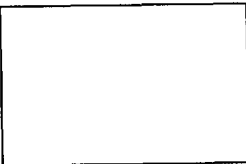
SOURCE Documentary
Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 3 (64) for 1962 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". This three-part article, the first part written by General-Leytenant G. Belov and General-Major A. Lesovoy, the second by Lieutenant Colonel V. Yerofeyev, and the third by General-Major G. Dudnik and Colonel V. Ushakov, is a review of an article written by General-Major V. Petrenko. The first section discusses the influence of nuclear weapons and other new combat means on modern defense. The reviewers point out that only the methods of organizing and conducting defensive actions were changed due to the development of armament, technical equipment and organizational structure of troops, but the overall objective and purpose of defense have remained the same. The second briefly discusses the nature of modern defense and emphasizes that defense will play an important role even in modern operations. The last section discusses radioactive contamination and what bearing it has on organizing defense. A method of calculating the radiation dose that personnel have received is also presented in this section.

End of Summary

[Redacted] Comment: [Redacted]

[Redacted] The article to which it refers was disseminated as [Redacted] (IRONBARK).



Certain Problems of Modern Defense

by

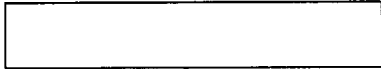
General Leytenant G. BELOV
General-Major A. LESOVOY
Lieutenant Colonel V. YEROFEYEV
General-Major G. DUDNIK
Colonel V. USHAKOV

Topical problems of modern defense were raised in the article by General-Major V. PETRENKO.^{*} The author, in our opinion, correctly notes that, with the employment of nuclear weapons and other new combat means, defense acquires a more decisive nature. However, we cannot agree that principal differences supposedly exist between the defense objectives of present-day and past wars.

The history of wars show that with the development of the armament, technical equipment, and organizational structure of troops, the methods of organizing defense and conducting defensive actions have changed. The overall objective and purpose of defense have always been unvarying. And in present-day conditions the objective of defense remains as it was before: to repulse the attack of superior enemy forces, to inflict considerable losses on him, to hold occupied positions, and, at the same time, to create favorable conditions for going over to a decisive offensive. The very meaning of defense lies in preventing, with limited forces that are insufficient for an offensive, the enemy from conducting a successful offensive, that is, in holding a specific terrain sector or zone.

The author justifies his viewpoint by the fact that nuclear and missile weapons provide defending troops with the capability not only of repelling an offensive of superior enemy forces which has already begun, but also of breaking it up still during the preparation period, and following this, of going over from the defense to an offensive themselves in a short time.

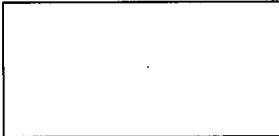
^{*} Collection of Articles of the Journal "Military Thought", No. 6 (61), 1961.



However, in the first place, breaking up an enemy offensive under preparation is not a new objective, but only a different method of achieving the former objective of defense with new combat means. In the second place, the going over of the defending troops to an offensive cannot be considered a change in the defense objective, but is only an addition to it, which is conditioned by the increased combat capabilities of the troops. Thus, in both cases, the main objective of defense remains holding occupied positions and areas. Furthermore, defense, as a rule, will have limited forces (especially when there are insufficient nuclear munitions). Under these conditions, after a serious defensive engagement, the defending troops will not always be able to go over to an offensive without reinforcements.

The author, while emphasizing the importance of utilizing the advantages of positional forms of combat, subordinates the holding of areas to the maneuvering of troops in a defense in modern conditions. We do not deny the increased role of maneuvering of all means, especially fire, in modern defense; however, every maneuver must be completed for the sake of some purpose. In a defense, a maneuver, as we know, is carried out for delivering a counterthrust or conducting a counterattack, reinforcing or replacing troops of the first echelon which have suffered considerable losses from an enemy nuclear strike, destroying enemy airborne landing forces, taking positions on axes in the gaps that have been formed in the battle formations of troops, etc. Consequently, it is not the defense of positions which is subordinate to a maneuver, but a maneuver, in all instances, which is subordinate to the overall objective of defense, to the holding of specified positions or terrain areas. This is especially apparent in the defense of a coastal area, where the efforts of the defending troops are directed toward preventing the landing of the enemy on the beach.

On the other hand, depending on the situation, various methods of troop actions can be employed to achieve the objective of defense. In some cases they will have an offensive, and in others, a defensive nature. For example, in a defense of a coastal area, first of all, it is necessary to deliver nuclear strikes against enemy embarkation ports and against his ships at sea in order to disrupt an amphibious landing operation under preparation. If they are not successful in this, the defending troops will be forced to repulse the enemy's attempts to carry

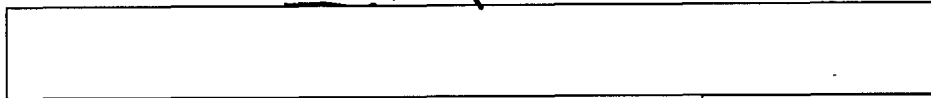


out the landing and to hold the prepared positions on the coast. And here, maneuvering of forces, means, and fire will be subordinate to the overall objective of defense.

The significance of dispersing defending troops along the front and in the depth, of conducting antinuclear maneuvering, and widely employing all types of shelters for personnel, armament, and combat equipment has grown in modern conditions of employing nuclear weapons. We support the opinion of Marshal of the Soviet Union V. N. CHUYKOV that modern defense must be first of all antinuclear, antitank, antichemical and antilanding. Careful engineer preparation, as one of the main conditions of the successful achievement of the defense objective, predetermines the presence of appropriate defense areas and positions. For example, in the defense area of a division it is necessary to have three to four or more positions. It is more advantageous to keep second echelons and reserves, not in concentration areas, but directly in positions in readiness for defense, and also for conducting counterattacks and counterthrusts. The latter should be carried out only when the forces are supported by nuclear weapons and other means for destroying the enemy.

The history of wars shows that troops go over to the defense, as a rule, of necessity, when their offensive capabilities are exhausted on a given axis. Even Comrade PETRENKO does not refute this, but, at the same time, he draws an unsubstantiated conclusion about the necessity in modern defense, not only of positional stability, but also of offensive striking power. If the troops had this striking power at their disposal, then there would be no reason for them to be on the defensive. The author's conclusion may be apropos only in the case when the troops intentionally go over to the defense, while on a given axis sufficient forces and means are being accumulated for a subsequent offensive, as it was, for example, in the Battle of Kursk in 1943.

We also cannot agree with the author's assertion that the best means of conducting a defense, supposedly, must become a powerful fire strike by all types of weapons, followed immediately by an attack by the troops. Undoubtedly, this would be an ideal case, assuming the defending troops had superiority of forces over the attacking enemy, first of all in nuclear



means, but, as a rule, this does not happen in a defense. With a limited amount of nuclear munitions, it is impossible to rely on the complete rout of an attacking enemy grouping by the offensive actions of the defending troops, with their movement out from behind the prepared positions.

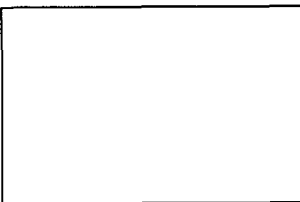
Once again, we must emphasize that troops in prepared positions are several times less vulnerable to destruction from nuclear and conventional fire means in comparison with advancing troops. This is especially characteristic during the delivery by the enemy of nuclear strikes and the immediate repulse of his attack, when the main thrust of combat actions of both sides will rest on conventional fire means: artillery, tanks, aviation, and small arms. Here, in order to destroy the defending troops with their fire means, the attacking troops need a considerable superiority of forces. If the defending troops are removed from the prepared positions, they may be destroyed rather rapidly. Therefore, in our opinion, even counterattacks and counterthrusts in a defense should be conducted only when there is the capability of reliably supporting them with nuclear weapons and other means for neutralizing the enemy.

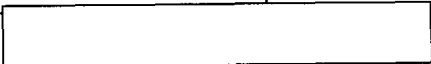
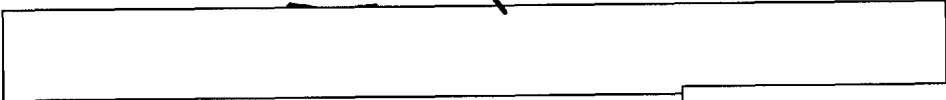
* * *

The topicality of General-Mayor V. PETRENKO's article is determined by the fact that problems of modern defense have not yet been sufficiently worked out theoretically, while in the practice of troop combat training, defense is quite often underestimated in general, and its employment is limited only to the side playing the role of the enemy.

The author correctly points out that the situation almost reached the point of negating defense as an independent type of combat actions and of recognizing its necessity, at best, only at the tactical level.

This situation does not seem accidental to us. New means of armed combat with unprecedented power and destructive elements have strengthened the material basis of our military doctrine even more, which as we know, is offensive in nature. As a result, there appeared a striving to fulfil tasks, both in an operation and even in a battle, by an offensive alone.



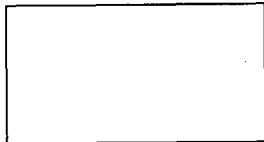


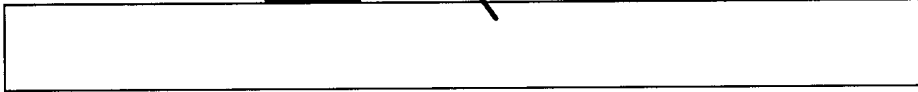
This one-sided, exclusively offense-oriented approach to assessing combat actions of a future war ignores the experience of past wars and contradicts the dictates of V. I. LENIN, "There has never been a war," LENIN said, "that was an uninterrupted victorious advance from beginning to end, and at any rate, those that did occur were exceptions." (Works, Vol. 33, page 74). This principle is completely valid in modern conditions, when nuclear weapons and other means of mass destruction make it possible for both warring sides to more quickly and more frequently change the balance of forces in their favor.

We must bear in mind that our probable enemies also have weapons of mass destruction at their disposal, they have numerically strong, technically well-equipped armed forces and will also strive to conduct decisive offensive operations. Therefore, on individual axes, at the beginning and during the course of a war, the possibility has not been ruled out that the enemy may establish superiority in forces and means, and seize the initiative, as a result of which he will force our troops to go over to the defense.

Defense, in our opinion, will find employment not only in secondary, but, in a number of cases, even in the main theaters of military operations. For example, in one of the operational exercises in October 1961, a situation was created, which was characterized by deep mutual penetration by troops of both warring sides, who conducted meeting offensive operations. In the course of the offensive operations, defensive actions were especially practicable in repulsing the counterthrusts and counterattacks of the enemy.

The experience of the Great Patriotic War and postwar exercises shows that going over to the defense in the course of offensive operations is not a simultaneous halting of all large units and even units on some specified line, but successive halting, depending on the increase of enemy opposition, especially with his initiation of a counterthrust or counterattack. At the same time, the offensive of another part of the forces of an army or front will be continued. Thus, for example, the 38th Army of the First Ukrainian Front, after an assault crossing of the Dnepr River and seizure of the city of Kiev on 9 November 1943, when exposed to counterthrusts of the enemy, was forced to conduct defensive actions with the forces of





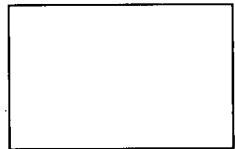
two divisions on the Fastov axis, while, with troops of the left flank, in cooperation with the 60th Army and 3rd Guards Tank Army, it continued to advance on the Zhitomir axis.

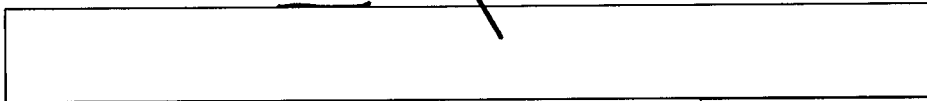
In an operational exercise in June 1960, individual large units of the [2nd] Army of one of the sides went over to the defense when they encountered superior enemy forces, while part of the forces simultaneously continued the offensive on adjacent axes.

Unfortunately, working out the problems of such a defense has still not found proper reflection in the practice of troop combat training. In the majority of exercises conducted in military districts in 1961, the advance organization of defense continued to be examined, in a number of cases, in positions previously prepared in the engineer aspect.

Meanwhile, a defense in the course of an offensive will be hastily occupied in more complex and difficult conditions, when there is only exceptionally limited time available for organizing it and for engineer preparation, under the forceful, ever increasing activity of the enemy, sometimes even with the initiation of repulsing his attacks. It is not accidental that on the pages of the military press, the most diverse opinions are expressed concerning matters of organizing and conducting a defense in the course of an offensive operation.

For example, there are opinions that, even in a present-day offensive, if necessary, troops will go over to the defense in advance, striving to achieve the objectives of defense by breaking up a counterthrust or counterattack of the enemy even in the period of their preparation, by means of delivering massed nuclear strikes. But, if counterattacking groupings of the enemy are routed before the beginning of their aggressive actions, then, the advancing troops will have no reason to go over to the defense, whereby they would deliberately lose the initiative and place themselves under the threat of nuclear strikes. Obviously, insufficient forces and means, and, in the first place, nuclear weapons, will be the main reason for the troops to go over to the defense.





Consequently, the need to go over to the defense in an offensive operation arises if measures to rout concentrated or major reserves of the enemy moving forward and break up his counterthrust have not achieved the desired success and our advancing troops will be forced to carry out this task with defensive actions. In these conditions, a defense, in our opinion, will, as a rule, be a forced type of combat actions, pursuing the objective with lesser forces to repulse a counterthrust or counterattack of the superior enemy and to create conditions for a subsequent [two words illegible] offensive.

Fully supporting the author's opinion that modern defense in all cases must meet the standard requirements of being aggressive and stable, we feel that the procedure for the troops to go over to the defense in an offensive and the work methods of the commanders and staffs for organizing it will differ from a previously prepared defense.

There is another opinion, consisting of the idea that in the course of an offensive, defense will represent the totality of defensive-offensive actions of individual large units and units without a strictly expressed defense disposition of troops. Thus, the need for positional forms of combat is rejected, and we will rely only on the striking power of the defending troops, which supposedly will carry out the tasks of the defense in battle formations set up in the course of previous offensive actions. Here is a clear attempt to replace a defense with meeting engagements and battles, which, in our opinion, cannot ensure the successful repulse of attacks of superior enemy forces. This task can be fulfilled only by a strong defense based on fire and maneuvering and organized into a unified system with wide use of favorable conditions of the terrain and engineer preparation. Therefore, we feel that the nature of modern defense given by the author as positional-mobile, with a troop disposition and methods of actions specifically peculiar to defense, is correct.

Stemming from the experience of the last war and conditions of organizing a defense in the course of a modern offensive operation, we feel that the primary task to be fulfilled by troops which are hurriedly going over to the defense, is to take





measures directed toward breaking up or maximally weakening the activity of the enemy and stabilizing the situation of one's own troops. This is achieved by destroying the enemy counterattack grouping with concentrated fire strikes, by employing nuclear and chemical weapons, and fortifying areas of the terrain which are advantageous in an operational-tactical sense.

Fortifying the terrain, in essence, is not yet defense, but it represents the first stage in its establishment. This will be carried out by only part of the forces and in that grouping which has formed at the given moment. The purpose of fortifying the terrain is to gain time for setting up a defensive grouping and a defense disposition by the main forces of the troops of a large unit or a formation which are going over to the defense.

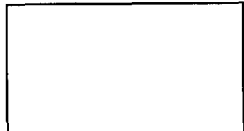
Under present-day conditions it is necessary to carry out fortification not of lines, as was done in the past, but of areas of the terrain which overlap the axes of actions of enemy attack groupings. These areas will become the basis for the subsequent disposition of the defense system.

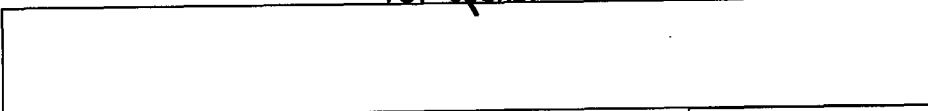
Tasks for troops in fortifying the area should be set immediately upon receipt of instructions to go over to the defense, or when there is a clear threat that the enemy will initiate a counterattack, by means of brief preliminary instructions over technical communications means.

Following this a defensive grouping of forces and means and a system of fire and obstacles are established and engineer preparation of the area is carried out.

We cannot agree with the author's assertion that in a defense motorized rifle subunits do not have to be reinforced with tanks. In particular, when one goes over to the defense in the course of an offensive, it is specifically tanks, combining fire power, armored protection, and high maneuvering capabilities, which are capable of quickly setting up a stable defense.

The remaining antitank means do not have such capabilities and are comparatively quite vulnerable to the fire means of the enemy. In addition, antitank rocket launchers are capable of delivering effective fire at limited range, and antitank guided





missiles for the present have a considerable dead space, which is associated with the unguided portions of their trajectories, and limited capabilities under conditions of poor visibility.

In our opinion, the author is, without basis, against establishing division and regiment artillery groups in a defense. This assertion contradicts the modern positions on the role of fire of conventional means. Neither the number of rocket launchers, nor their capabilities for delivering nuclear strikes can ensure the fulfilment of all fire tasks in a defense. Therefore, troops must more fully make use of the fire capabilities of artillery, aviation, tanks, small arms, and other means. It is necessary to set up powerful fire groups, including organic artillery and long-range artillery reinforcement means for the commanders of large units and units.

* * *

As a supplement to the article of General-Mayor V. PETRENKO we would like to examine the matter of considering the radiation situation when organizing a defense, since, as a result of ground nuclear bursts, radioactively contaminated areas of the terrain, especially in the initial period of a war, can cover hundreds of thousands of square kilometers.

In this case, we should point out that the possibility of decreasing the radiation dose the troops get in a defense is considerably lower than in an offensive. This is due to the fact that in a defense troops are forced to operate in specific areas for a longer time, and maneuvering, combined with positioning, is more limited in comparison with an offensive. Therefore, the defending troops are more exposed to the effect of radioactive irradiation than the advancing troops.

At present various opinions are expressed on matters of organizing and conducting a defense in a contaminated locality. The best variant, of course, would be to occupy the defense beyond contaminated areas. But, since defense is a forced type of combat actions, this will not always be feasible. Based on the experience of exercises, we feel that, in a number of cases, part of the forces of an army (front) should defend in





contaminated areas specifically, for example, when holding advantageous operational lines, whose loss on a given axis would seriously worsen the situation of the defending troops.

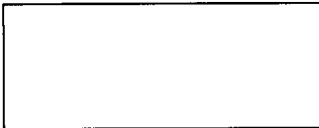
Unquestionably, in all conditions the basic criterion in solving this problem will be the degree of possible irradiation of personnel based on the maximum tolerable doses which do not cause radiation sickness. These doses, as we know, are, with a single exposure (in the course of 24 hours) -- 50 r (roentgens), for multiple exposure (over a 10 day period) -- 10 r per day, and with systematic exposure -- one r per day, but not more than 100 r per year.

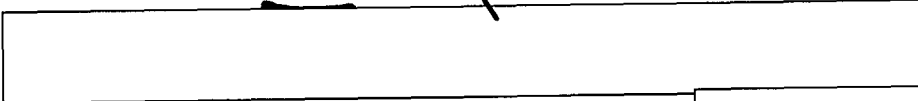
However, if the levels of radioactive contamination exceed the tolerable radiation doses (taking into account even the employment of means of protection), the stay of personnel in a given location becomes dangerous, since radiation sickness leads to considerable losses of troops and decreases in their combat effectiveness.

When solving the problem of conducting defensive operations in contaminated areas, not only should general data on the contamination levels be considered, but also the time of the nuclear burst and the radiation decay factor. Let us corroborate this with an example.

Let us assume that troops were in an area where the level of radiation one hour after a nuclear burst is 10 r per hour. After remaining in this area for 24 hours, the troops will receive a radiation dose of about 24 r. This is determined by the formula $DS=P(A_1-A_2)=10(5.00-2.65)=23.5$ r. Here P is the level of radiation; A_1 and A_2 are the coefficients of calculating the radiation dose for the length of the stay in the zone (they are taken from tables for estimating radioactive contamination of the terrain). But if the level of radiation also equals 10 r per hour, and it becomes constant in the contaminated area 24 hours after the nuclear burst, then, in the course of the 24 hours, the troops in this area will receive a considerably larger radiation dose, in the range of 160 r, $DS=10(120-104)$.

Consequently, even when radiation levels and the time of remaining in the contaminated areas are identical, troops will





receive a larger radiation dose in an area where this level following a nuclear burst becomes constant later. This is explained by the fact that the decay of radiation in the first days occurs considerably faster than later on. That is why, even when there are comparatively low levels of radiation, it will still be dangerous to keep troops in areas located close to ground zero.

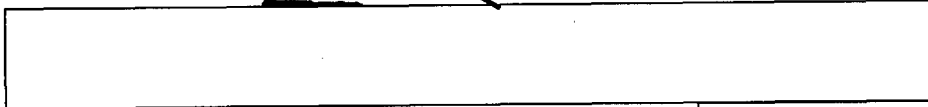
Determining the nature of radioactive contamination is especially complex when the enemy delivers several nuclear strikes on a given area. Here, a more thorough radiation reconnaissance is needed for those sectors which have overlapping radioactive zones.

In each actual case of organizing a defense, the commanders and staffs of all levels must establish the possible radiation doses with regard to the doses previously received by the troops. This is one of the most important conditions when adopting a decision and setting tasks for troops for a defense in contaminated areas. Obviously, sectors of the terrain with comparatively high levels of radiation must be defended by large units and units, which, in comparison with other troops, have received the smallest radiation dose in previous battles.

And if, in the interests of a most rapid rout of the attacking enemy we should sometimes permit a certain amount of overexposure of personnel, it is always necessary to conduct a decisive struggle against radiation fear and, on the whole, against nuclear fear, the presence of which can negatively affect the fulfilment of combat tasks in a defense.

Inasmuch as the combat effectiveness of troops defending in a contaminated locality depends to a great extent on the irradiation of personnel, careful monitoring and calculating of the radiation doses received are very necessary. In our opinion, such monitoring must be conducted in formations, large units, units, and subunits on the scale of all personnel, and in addition, in a front, army, and corps -- of the personnel of each large unit (combined-arms, rocket and other branch arms of troops), in a division -- of a regiment and subunit of division subordination, in a regiment -- of a battalion and company, in subunits -- of each officer, noncommissioned officer and soldier. The calculations of the radiation dose received by the personnel





must be carried out systematically, that is, during each battle conducted in a contaminated locality, and every 24 hours. To best fulfil this measure, in our opinion, it is advisable to include in the T/O of staffs of fronts, armies, divisions and regiments officers who will be in charge of recording the irradiation of personnel. This will promote the correct assessment of the conditions of the troops and their effective employment in an operation and battle. For example, when adopting a decision for a defense, it is necessary to determine the maximum time for the troops to remain in a contaminated locality based on the radiation dose which the personnel can receive there without being subjected to radiation sickness. When this time limit expires, the defending troops, without disrupting the stability of defense, must be replaced by large units and units who are in the reserve (second echelon). In so doing, it is necessary to consider reducing the radiation effect by having personnel employ various protective means, utilizing defensive structures and shelters, and also the protective properties of tanks, armored personnel carriers, and other combat vehicles.

In our opinion, the disposition of the defense and concentration of main efforts under the conditions examined depend on the width of the zone of contamination and the limits of radiation levels in the wake of the radioactive cloud, determined with the aid of computers or the graphic calculation method with subsequent radiation reconnaissance.

If, in the area of an army, the width of the zone of contamination on an occupied defense line is relatively small (10 to 15 kilometers), the main forces of the defending large units should keep behind this zone in readiness to deliver strong counterattacks and counterthrusts.

The task of the first-echelon units defending in sectors where there are lower levels of radiation or in front of the zone of contamination, is, with a strong defense, to prevent the enemy from penetrating and force him to attack on axes having high levels of radiation. The latter circumstance must be utilized for quickly preparing areas of destruction by fire (pockets of fire) and conducting flank counterattacks and counterthrusts, in order to rout the attack groupings of the enemy ground forces and break up his offensive.





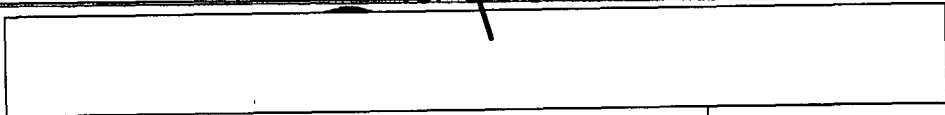
But if the zone of contamination is very large and is several tens of kilometers in width, part of the forces of an army (front) will have to defend themselves directly in this zone, on the axes with the lowest, yet maximally tolerable, levels of radioactive contamination. Here, obviously, troops will have to be replaced more frequently. Calculations and the experience of exercises show that, depending on the radiation situation and the degree of irradiation of personnel at a given time, this replacement is carried out after several hours, the maximum time being after 24 hours. Of course, in the course of a defensive engagement it is not always carried out on time, which must be taken into consideration when organizing a defense. Moreover, we feel that questions of replacing troops which are defending in a contaminated locality should be worked out individually in the staff on the basis of the commander's decision for the defense, with due regard for the condition of troops from the standpoint of irradiation.

The frequent withdrawal of troops from contaminated areas, their replacement or reinforcement with second echelons and reserves, maneuvering of fire, and conduct of counterattacks and counterthrusts -- all this gives defense in a contaminated locality a brief and exceptionally mobile nature.

It is very complicated to carry out engineer preparation in a contaminated area and to equip the defending troops there. For example, when carrying out engineer preparation, the personnel can receive a considerable radiation dose as a result of the dust which is produced. Therefore, in our opinion, the protective properties of the terrain and the engineer works and shelters which have already been prepared should be fully utilized.

Organizing the supply and, in particular, the feeding of troops defending in contaminated areas, presents a special difficulty, since provisions may become contaminated with radioactive substances, and, in addition, personnel must constantly stay inside protective means.





Thus, in our opinion, in a defense in the conditions examined, it is necessary to have detailed deliberation and planning of combat actions, increased combat support of troops and control of them, periodic decontamination treatment of personnel and decontamination of equipment and armament, especially after a battle in contaminated areas. Troops withdrawn from these areas must be brought to full combat readiness in a short time.

