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16 April 1974

MEMORANDUM FOR: The Director of Central Intelligence

SUBJECT

MILITARY THOUGHT (USSR): The Transition from Conventional Warfare to Nuclear 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 <u>Collection of Articles of the Journal 'Military Thought'</u>. This article assumes the inevitable transition of a future world war from conventional to nuclear warfare. The characterization of the conventional phase therefore stresses vigilance to detect enemy nuclear strike preparations, the identification and destruction of enemy nuclear capability, and the readying of one's own nuclear weapons for use. The authors point out that the initial nuclear strike must be coordinated and authorized, and that authentication procedures should be adequate to preclude unilateral nuclear weapon employment by commanders in threatened situations or cut off from higher commands. This article appeared in Issue No. 2 (81) for 1967.

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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Deputy Director for Opera	tions

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Intelligence Information Special Report

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SUBJECT

MILITARY THOUGHT (USSR): The Transition by Troops from Combat Operations with the Exclusive Use of Conventional Means of Destruction to the Use of Nuclear Weapons

SOURCE Documentary

Summary

The following report is a translation from Russian of an article which appeared in Issue No. 2 (81) for 1967 of the SECRET USSR Ministry of Defense publication <u>Collection of Articles of the Journal 'Military</u> <u>Thought''</u>. The authors of this article are Colonel A. Postovalov and <u>Colonel I. Pivovar</u>. This article assumes the inevitable transition of a future world war from conventional to nuclear warfare. The characterization of the conventional phase therefore stresses vigilance to detect enemy nuclear strike preparations, the identification and destruction of enemy nuclear capability, and the readying of one's own nuclear weapons for use. The authors point out that the initial nuclear strike must be coordinated and authorized, and that authentication procedures should be adequate to preclude unilateral nuclear weapon employment by commanders in threatened situations or cut off from higher commands. End of Summary

Comment

There is no information in available reference material which can be firmly associated with the authors. <u>Military Thought</u> 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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The Transition by Troops from Combat Operations with the Exclusive Use of Conventional Means of Destruction to the Use of Nuclear Weapons by

Colonel A. Postovalov and Colonel I. Pivovar

In our army, as in the armies of our probable enemies, primary attention is being given to developing theories for the conduct of nuclear war. This is quite natural, since a future world war will in all probability be nuclear. But the possibility cannot be excluded that a world war may also be initiated without the employment of the means of mass destruction. However, it will inevitably escalate to a nuclear war, since the enemy, upon suffering defeat, will undoubtedly employ all of his available forces and means, including his means of mass destruction, to change the situation in his favor.

Thus, a war initiated using only conventional means of destruction will be waged under the constant threat of escalation to unlimited nuclear war.

This circumstance sharply reduces the possibilities that forces of either side will be defeated, a circumstance which cannot but give rise to substantial changes (when compared to a nuclear war) in the nature, methods, and forms of troop combat actions. However, one should not suppose that the nature of combat actions under these conditions will have much in common with operations of the past war, since the constant threat of the use of the means of mass destruction and the indispensably high state of readiness of forces and means to employ nuclear weapons will markedly distinguish future combat actions.

One of the most important and difficult problems of conducting combat actions using only conventional means of destruction is the transition to the use of nuclear weapons. The achievement of the goals of an operation will depend to a decisive extent on how successfully nuclear weapons are used and, at the same time, on the prevention of massive casualties from enemy nuclear strikes.

Proceeding from this, the following are the most important tasks for troops advancing in an offensive in which only conventional means of destruction are employed: the timely detection of enemy intentions to deliver a nuclear strike; the reduction to a minimum of the effectiveness of such a strike; and the maintenance of constant readiness for swift transition to the use of the means of mass destruction.

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The timely detection of enemy intentions to use nuclear weapons is extremely difficult, because a relatively high degree of readiness has been achieved in nuclear attack means from the technical point of view and, therefore, only a very short time is needed to prepare the delivery of the initial nuclear strike. The technical specifications of operational and tactical rockets, and the time required to define objectives, lead to the conclusion that enemy rocket units are capable of delivering a nuclear strike 30 to 60 minutes after receiving the signal to use nuclear weapons and that artillery can do the same after 10 to 20 minutes. Delivery aircraft of tactical aviation which are on 5 to 15 minute readiness status and located 300 to 400 kilometers from the front lines can deliver a strike within 20 to 30 minutes after receiving a signal, and aircraft on 30 to 40 minute readiness can do this within 50 to 60 minutes.

There are no easily detectable signs by which one can unerringly determine immediate preparations by the enemy to use nuclear weapons. However, there are a number of measures which, when carried out by the enemy, may indicate that the moment is approaching when nuclear weapons are to be used. Thus, for example, the withdrawal of troops from probable targets of nuclear weapons, increased dispersal of troops and rear area installations, stepped-up engineer preparation of the area, the evacuation of people from cities, the occupation of shelters by troops, and increased engineer preparation in areas where second echelons, reserves, and rear area installations are located, may indicate increased preparations by the enemy to protect his troops and rear area installations from a possible retaliatory strike.

Changes in missile and aircraft check routines and in the operation of depots and nuclear munitions assembly bases, an increase in the number of duty aircraft in the air, increased activity in the operation of radio nets that provide control and warning communications for nuclear munitions supply means, and the takeoff of aerial command posts, are signs that nuclear means have been brought to their highest state of readiness; and the mass launch of intercontinental missiles with the simultaneous takeoff of strategic, tactical, and carrier aircraft will testify, in our opinion, that the war has escalated to nuclear war. The primary efforts of all types of intelligence should concentrate on the timely detection of these enemy measures. Their detection will allow us to preempt (upredit) the enemy in the use of means of mass destruction and to take timely measures, to increase the viability of all elements of our operational structure.

Reducing the effectiveness of an enemy nuclear strike may be achieved by constantly combatting his nuclear weapons and also by increasing the viability of our own rear area troops and installations.





The primary goal of combat with enemy nuclear weapons during the non-nuclear period of combat actions is to frustrate or weaken to the maximum his initial nuclear strike. From this it follows that the main principle in combatting his means of mass destruction remains the same as it would be in a nuclear war--to constantly seek to discover and to preemptively destroy them. Since troops will have many means for the delivery of nuclear munitions to targets, and since it will be difficult to determine which of them are ready for use, it will be necessary, in our opinion, to concentrate our principal efforts on the discovery and destruction of nuclear munitions in bases and storage points, and to discover and destroy launch-ready missiles in their launching sites.

The difficulties in destroying enemy targets result, above all, from the fact that combat against these means will be carried out mainly by aviation, artillery, and air defense means employing conventional munitions which have limited destruction capabilities. In addition, one must keep in mind that to hit them with a high degree of reliability, greater accuracy is needed in determining their coordinates, which, in turn, requires a greater expenditure of reconnaissance forces and means.

Aviation is one of the basic means of reconnoitering and combatting enemy nuclear weapons, since it is capable of detecting and destroying objectives at a considerable distance from the front lines. It is common knowledge that a pair of fighter-bombers can destroy in a single sortic a tactical or operational-tactical rocket launcher and that a flight of aircraft can neutralize a nuclear artillery battalion at its fire positions. Two bomber squadrons can neutralize a missile battalion in its siting area.

The experience of operational exercises and war games shows that during the non-nuclear period of combat actions, only 70 to 75 percent of the aircraft of fighter-bomber and bomber aviation can be used to strike objectives with conventional munitions, and, according to plans, approximately 30 to 50 percent of this percentage are to be used to combat nuclear means. Under these conditions, an air army composed of two fighter-bomber divisions and one bomber division can, in a single sortie, neutralize and destroy up to 15 or 20 objectives of the type represented by operationaltactical rocket batteries. By taking into account the capabilities of carrying out repeated sorties during one day, the number of enemy objectives struck can be doubled or tripled.

If the efforts of aviation are focused mainly on neutralizing and destroying nuclear means in the operational depth, then the principal burden of combatting tactical nuclear weapons will devolve upon artillery.





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Calculations show that an Honest John rocket launcher can be destroyed by an artillery strike from one to three artillery batteries and a nuclear artillery battery can be destroyed by the fire of one artillery battalion. Thus, the first echelon of a combined-arms army, composed of 3 or 4 divisions reinforced by an army artillery brigade and an artillery division from the Reserve of the High Command, can simultaneously neutralize and partially destroy by artillery fire up to 30 artillery batteries and *free*-rocket launchers.

Special detachments (composed primarily of tank subunits) and airborne landings will also be used to combat nuclear weapons, and radiotechnical means will be used to disrupt the control of the means of mass destruction.

Special detachments can be detached, primarily from the forward large units of an army. The primary targets of their efforts are tactical installations and, as the offensive proceeds successfully deep into the enemy area, the operational means of nuclear attack will also become their targets. By exploiting breaches and gaps in the enemy combat dispositions, the special detachments can advance rapidly to the areas where the nuclear strike means are located or to the routes along which they are moving and there vigorously attack and destroy them. Based on exercise experience, an army can simultaneously dispatch from the divisions of the first echelon 6 to 8 detachments to a depth of 30 to 80 kilometers beyond the line of contact of both sides.

It is advisable to use airborne landings to destroy enemy installations located deep in his area if aerial reconnaissance has difficulty in discovering them and if the precise data required to destroy them by fire are inadequate. Among such installations are bases and army depots for nuclear munitions, mobile field depots and special weapons storage points, control posts, airfields, and siting areas for the operational-tactical delivery means of nuclear munitions.

Depending on the nature of the objective and its security and defenses, and also on the depth at which it is located within the enemy area, an operational or tactical airborne landing force is dropped to destroy it.

The viability of troops and rear area installations is increased by dispersing them as much as possible, by exploiting to the maximum the defensive and concealment features of the terrain, by providing engineer preparations for the terrain, by furnishing carefully planned operational and troop camouflage, and by conducting aggressive and highly mobile



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actions. In addition, it is necessary to be constantly prepared to eliminate the aftereffects of enemy use of weapons of mass destruction.

The dispersal of first-echelon troops is feasible only within reasonable limits, those which ensure that the troops will successfully accomplish their combat tasks. Consequently, troops will be compelled to operate in relatively dense dispositions. Accordingly, in order to avoid massive casualties should the enemy deliver a surprise nuclear attack, it will be essential, together with detection and an effective strike against his nuclear means, to conduct combat actions at high speeds and to carry out the concentration of forces and means required to accomplish combat tasks in the shortest time possible, and then follow up by dispersing them.

It is advisable that the dispersal of second echelons, reserves, control posts, and rear area installations be equal to that dispersal which would be in effect in a nuclear war. Second echelons of an army should be positioned and relocated in areas beyond the range of enemy tactical nuclear means, and second echelons of divisions should be beyond the maximum range of enemy nuclear artillery. The growing mobility of troops and a dispersal of this nature will make it possible to carry out moves within a short period of time along the most important axes in order to achieve a buildup of efforts and to accomplish new tasks.

A considerable increase in the viability of the most important elements of an operational disposition of troops can also be obtained by skilfully exploiting the protective and concealment features of the terrain and by providing engineer preparation of the terrain; this will, to a certain degree, prevent massive casualties from surprise enemy nuclear strikes.

As is known, even in peacetime cur probable enemy is carrying out extensive measures in the Western Theater of Military Operations in preparation for the installation of nuclear land mines in the border zone in front of favorable lines of defense and on the approaches to the most important strategic objectives.

How to overcome the nuclear obstacle zones requires special study; therefore we shall dwell only on individual recommendations which we now offer.

During combat actions in which only conventional means are used, it is very important to prevent the installation and arming of nuclear land mines. This task may be accomplished by air strikes against the enemy subunits transporting and placing them, by the actions of forward





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detachments and airborne landings, by the aggressive advance of the main forces, by reconnaissance of the operating frequencies of radio and radiotechnical means, and by jamming.

During an offensive, forward detachments, ranging in strength from a reinforced motorized rifle (tank) battalion to a reinforced motorized rifle (tank) regiment, may be detached from first-echelon divisions; and tactical airborne landings may be made on the decision of army commanders and the front commander. In individual cases, operational airborne landing forces may be dropped deep in the enemy area to prevent the laying of nuclear minefields.

Eorward detachments, avoiding combat with enemy combined-arms units, advance aggressively to the area where the nuclear land mines have been installed or are stored, destroy the subunits guarding and servicing them, seize the nuclear mines, and destroy them.

If the enemy lays nuclear minefields in advance, wide-ranging reconnaissance is organized to determine the boundaries in width and depth of the minefields, the location of the detonation control posts, the types of nuclear land mines, the places where they are laid, the composition of the covering forces, and the presence of conventional obstacles.

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As a rule, mined areas are bypassed by troops on the offensive. When it is impossible for them to be bypassed, they are negotiated by the main forces after the forward detachments and airborne landing forces have seized individual sectors of the minefields and destroyed (deactivated) the nuclear land mines found there.

When nuclear minefield sectors are seized, the forward detachments and airborne landing forces concentrate their efforts on destroying the detonation control posts and the nuclear land mines. Their actions are extensively supported by air strikes and artillery fire.

Forward detachments and airborne landing forces themselves detach special groups to seize and destroy the nuclear land mines. The number of these groups is determined by the estimated number of nuclear land mines (pits) on the axis of operation of a given advance detachment or airborne landing force. Exercises have revealed that <u>it is advisable</u> that the <u>groups detailed to seize</u> and destroy nuclear land mines include subunits ranging in size from a platoon to a company and that they <u>be reinforced</u> by artillery, tanks, antitank guided missiles, and engineer and chemical troop subunits. The engineer subunits detailed to the special groups were provided with conventional and nuclear land mine detection equipment,



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generators to produce local jamming, explosives, drills, and other equipment.

To disrupt the radio-controlled detonation of nuclear land mines, radio jamming emitters with one-time action can be dropped into the nuclear minefield sectors and special units can create beamed radio jamming.

Aggressive actions by forward detachments and airborne landing forces and, in some cases, also by diversionary units, in conjunction with troops making deep penetrations on other axes, may compel the enemy to prematurely detonate the installed nuclear minefields.



In this case, their detonation may signify the initiation of a transition to the use of nuclear weapons and other means of mass destruction.

<u>Constant readiness to use the means of mass destruction immediately is</u> attained by having rocket troops and aviation at a high level of readiness to deliver nuclear strikes and by having troops ready to exploit immediately the results obtained.

The most important constituent part of the plan to conduct combat operations using only conventional means of destruction is to establish the procedure to be followed by the troops when they make the transition to the conduct of combat actions in the nuclear period. To this end, the following are established in the commander's plan and are constantly refined during combat actions: the installations to be struck by nuclear and chemical weapons; the procedure for echeloning stores of nuclear and chemical munitions; the degree of combat readiness of rocket troops and aviation to use these weapons; and the tasks for first-echelon troops in case nuclear weapons are employed. In our opinion, front and army rocket troops may be involved on a very limited scale in the delivery of strikes with conventional munitions. This can be attributed to the limited effectiveness of such strikes and also to the fact that the use of conventional rockets will lead to decreased readiness to deliver nuclear and chemical strikes. In individual cases they may deliver strikes against command posts, nuclear munitions depots, airfields, and other particularly important installations when it is impossible for aviation to deliver strikes against them for one reason or another.

Proceeding from these considerations, when planning an offensive in which only conventional means of destruction are used, the combat task for rocket troops should specify the objectives to be hit by the initial nuclear strike, the yields and types of bursts, the readiness levels for

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Taunchers and nuclear rockets, the procedure for delivering the initial nuclear strike, and the procedure for relocating during combat actions.

When assigning tasks to aviation, not only will the enemy installations and targets which are to be hit with conventional munitions be specified, but also those which are to be struck with means of mass destruction should a nuclear war develop; also specified will be the number of aircraft designated solely for the delivery of nuclear and chemical strikes, their readiness level, and the procedure they are to follow when participating in the initial nuclear strike.

It is evident that it is necessary to indicate to armies (large units) not only what their combat operations tasks will be when only conventional means of destruction are used, but also to specify the installations within their zone of operations which are to be struck during the initial nuclear strike by <u>front</u> (army) means, the number of nuclear and chemical warheads to be allocated, the degree of readiness of the rocket brigade (battalion) which is to use nuclear and chemical munitions, and the procedure for the initial use of nuclear weapons.

When coordination is being organized, in addition to coordinating routine matters, agreement is reached on what actions troops are to take at the moment the transition is made to the use of nuclear and chemical weapons.

During an offensive, in order to keep troops constantly ready to use nuclear weapons, it will be necessary, in fact, to adopt a plan for every specific situation and to assign tasks for the destruction of the enemy not only by conventional means but also by nuclear means.

Under the conditions being examined, the initial nuclear strike may occur at any moment after the onset of war. Certain special features mark the preparation and delivery of this strike. For example, during combat actions favorable conditions may develop for fuller use of tactical rockets. In addition, under the conditions of a rapidly and sharply changing situation, the role of the army troop commander in selecting objectives for the initial nuclear strike is significantly increased. However, in all cases, the decision for the initial employment of nuclear weapons is made by the front troop commander who, in turn, is guided by directives from the Supreme High Command.

Changes in the situation during combat actions in which only conventional means of destruction are used, the destruction of the most important enemy installations discovered, and the loss of our own nuclear



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means, will all necessitate continuous revision and elaboration in the plans for the initial nuclear strike. To this end, the formation commander and his staff must do the following: conduct purposeful and continuous reconnaissance, estimate enemy nuclear means and the likelihood of their employment, and discover new objectives which might have to be destroyed by our own nuclear weapons; formulate, as required, tasks for rocket troops and aviation concerning the delivery of the initial nuclear strike; in accordance with the situation, increase troop readiness to conduct combat actions employing nuclear weapons; to prevent lowering of the combat readiness of aviation to employ nuclear warheads; provide rocket troops and aviation regularly with meteorological data; and maintain continuous troop control, primarily over rocket troops and aviation.

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Research carried out in a number of war games and exercises has shown that all rocket troops launchers and no less than 25 to 30 percent of all supporting aircraft, i.e., delivery aircraft, have to be ready to deliver the initial nuclear strike. Nuclear rockets of rocket brigades designated to make the initial launch must be kept at readiness <u>No.</u> 2 and 3, and <u>tactical</u> rockets are to be located with the technical support platoons. Front aviation aircraft designated to deliver the initial nuclear strike should be kept at readiness No. 2. Such a degree of rocket and aircraft readiness will permit the initial nuclear strike to be delivered within 20 to 40 minutes after the command is received. Accordingly, if the coefficient of technical readiness is taken into account, up to <u>80 to 90</u> percent of all front rocket troops launchers and up to <u>80 percent of</u> aviation allocated for the delivery of nuclear munitions may be used in the initial nuclear strike.

The forces and means designated to deliver the initial nuclear strike will be priority targets for enemy air strikes, both nuclear and non-nuclear, and the enemy will concentrate the primary efforts of his reconnaissance to discover them. Therefore, during the non-nuclear period of combat actions the most important tasks are to conceal the relocation of rocket troops, to camouflage their siting areas, to provide dependable protection against enemy strikes, to organize security and defense against enemy airborne landings and sabotage detachments, to disperse materiel, to provide engineer preparation of siting areas, and to replace losses in a timely manner. All of these measures also apply to aviation bases.

To prosecute combat actions successfully after the initial nuclear strike is delivered, it is extremely important to have the capability of quickly employing nuclear and <u>chemical weapons</u> to strike at newly discovered, important enemy objectives. This capability is assured by properly echeloning nuclear and chemical munitions. Exercise and war game

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experience shows that adequate readiness in nuclear means for a second and subsequent launchings can be attained by stocking ready operationaltactical rockets with the technical support platoons of battalions (3 rockets), in the technical battery of a rocket brigade (6 rockets), and at least 9 rockets in each of the army and front mobile rocket-technical bases; by stocking tactical rockets with technical support platoons of divisional separate rocket battalions (6 rockets each), and at least 20 in the army and 16 in the front mobile rocket-technical bases; and, taking into account the expenditure rate established for the first two days of the offensive, by stocking nuclear bombs in the mobile rocket-technical base of the air army.

Calculations indicate that when nuclear munitions are echeloned in this manner, the second launching of operational-tactical rockets can be effected within <u>2 to 3 hours</u>, and <u>of tactical rockets no less than 1 to 1.5</u> hours; and these calculations do not include those rockets which were earmarked for the initial launching but were not used for one reason cr other (lack of targets, set aside on alert status, or for technical reasons). Small groups of delivery aircraft which had participated in the initial strike can carry out follow-up sorties within 60 to 90 minutes after they have landed at their airfields.

The timely discovery of enemy preparations to use nuclear weapons will permit us to take measures to increase the readiness of our troops. Operational-tactical rockets and aircraft can be brought to readiness No. 1, and tactical nuclear rockets can be set up on their launchers. In addition, it will enable a refinement in the tasks for the initial nuclear strike and for the exploitation of strike results by first-echelon troops; and the command can be given to raise the readiness level of rockets located in rocket-technical bases, technical batteries, and technical support platoons.

As indicated above, the <u>front</u> commander (Supreme High Command) will issue the order to deliver the initial nuclear strike and the order for the troops to go over to combat operations employing means of mass destruction. Nuclear strikes delivered by strategic missiles, missile-carrying submarines, and long-range aviation can also serve as other indications that a nuclear war has been initiated.

Upon receiving permission to employ nuclear weapons, the formation commander will send the appropriate signal to the rocket troops and to aviation and will refine the tasks of the first-echelon troops. Special consideration will be given to the rapid exploitation of the results of using nuclear weapons. To assure the security of troops on those axes





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where the offensive is successfully advancing, the objectives to be struck and troop safety lines are determined, but taking into account that the troops may be advancing at the moment when the strike is delivered.

The capability of a rapid transition to the employment of nuclear weapons after receiving appropriate permission depends to a large degree on uninterrupted and efficient troop control, primarily on the reliability of the control of nuclear munitions delivery means. To assure the reliability of troop control while engaged in combat actions in which only conventional means of destruction are employed, the very same measures are adopted as under nuclear warfare conditions; therefore, in our opinion, there is no need to dwell on them in detail.

If the enemy succeeds, during combat actions in which conventional weapons are used, in preempting (upredit) our delivery of nuclear strikes, the transition to the use of the means of mass destruction by our side may be carried out under very difficult conditions. It will be necessary to restore troop control, primarily over rocket troops, to determine the results of enemy nuclear and <u>chemical</u> strikes, to restore the combat effectiveness of units and large units which suffered massive casualties, and to adopt an extensive series of new plans to cope with the situation that has developed.

Under these conditions, our initial nuclear strike will be weakened, since only the surviving delivery means will be able to participate in it. The time it takes to deliver the strike will directly depend on the rapidity with which control over nuclear means is restored. The delivery of uncoordinated nuclear strikes on the initiative of commander's of operational-tactical and tactical rocket brigades, battalions, and batteries in accordance with previously established tasks (which by now might be already obsolete) will obviously not inflict significant harm on the enemy and is therefore inadmissible. It seems to us that in this situation the authority to use nuclear weapons for the first time must be granted to the army commander.

In conclusion, let us dwell on actions which rule out the possibility that nuclear weapons will be used without the approval of the Supreme High Command but on the initiative of battery or battalion commanders, or their subordinates, who might find themselves in a difficult situation as a result of combat actions or some other reason. There is no doubt that we must not underestimate the possibility that nuclear weapons may be used spontaneously during intense and decisive combat actions, when one cannot exclude the possibility that communications with higher commanders may be lost over somewhat extended periods of time.





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It seems to us that to resolve this problem will require the following: first, to provide for a reliable system of authentication signals when transmitting the command for the initial employment of nuclear weapons; second, not to place operational-tactical rockets and delivery aircraft at readiness No. 1 prematurely and, also, not to take launchers with tactical nuclear rockets out to the launching sites sooner than necessary but with due regard for the possible time that the permission to use nuclear weapons will be received; and third, to develop a system of technical measures which will preclude the possibility of having nuclear rockets launched by any member of a battery or battalion without approval of such senior officers as the division, army, and front commanders.

This article has been an attempt to summarize the experience gained in war games and exercises dealing with the problem of ensuring organized transition from combat operations in which only conventional means of destruction are used to those where nuclear weapons are used. Of course, a number of the aforementioned statements require further research and verification during exercises.