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CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

25 October 1974

MEMORANDUM FOR: The Director of Central Intelligence

SUBJECT : MILITARY THOUGHT (USSR): Combat with Enemy Tactical Means of Nuclear Attack in Offensive Operations

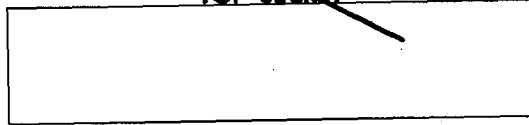
1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". This article assigns to the front the task of destroying enemy operational-tactical and tactical means of nuclear attack following an initial massive nuclear strike. Because of their rapid deployment capability, tactical means must be destroyed while they are still located at a distance exceeding their range. The author gives various possible formulas for the destruction of tactical nuclear means and examples of how such tactical means have been deployed by the enemy in Vietnam. This article appeared in Issue No. 1 (80) 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. For ease of reference, reports from this publication have been assigned

[Redacted]
William E. Nelson
Deputy Director for Operations

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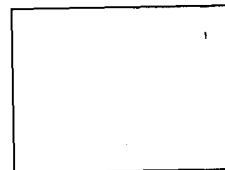
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Intelligence Information Special Report

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COUNTRY USSR

DATE OF INFO. Early-1967

DATE 25 October 1974

SUBJECT

MILITARY THOUGHT (USSR): Combat with Enemy Tactical Means of Nuclear Attack in Offensive Operations

SOURCE Documentary

Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 1 (80) for 1967 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal 'Military Thought'. The authors of this article are General-Leytenant V. Petrenko, Colonel V. Ryabchuk and Colonel M. Belovskiy. This article assigns to the front the task of destroying enemy operational-tactical and tactical means of nuclear attack following an initial massive nuclear strike. Because of their rapid deployment capability, tactical means must be destroyed while they are still located at a distance exceeding their range. The author gives various possible formulas for the destruction of tactical nuclear means and examples of how such tactical means have been deployed by the enemy in Vietnam.

End of Summary

Comment:

General-Leytenant V. Petrenko wrote several articles for the Collection of Articles of the Journal 'Military Thought', the most recent was: Issue No. 1 (86) for 1969. Colonel V. Ryabchuk and Colonel M. Belovskiy co-authored an article "Combat with the Tactical Means of Nuclear Attack of the Enemy in Offensive Operations", Issue No. 1 (80) for 1967. Colonel V. Ryabchuk also wrote an article in Krasnaya Zvezda 20 July 1967, "Logic of a Commander's Decision".

The SECRET version of Military Thought was published three times annually and was distributed down to the level of division commander. It reportedly ceased publication at the end of 1970.

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Combat with Enemy Tactical Means of Nuclear Attack in
Offensive Operations

by

General-Leytenant V. Petrenko

Colonel V. Ryabchuk

Colonel M. Belovskiy

The preemptive destruction of enemy nuclear attack means plays a major role in the successful conduct of a ground forces offensive and in effecting the total defeat of an enemy under the conditions of modern war. This mission will undoubtedly be carried out in the initial massive nuclear strike of a front.

But, as training exercises and calculations show, far from all of the enemy operational-tactical, and particularly his tactical, nuclear means may be put out of action simultaneously by such a nuclear strike. Under these conditions, undestroyed nuclear means can only be destroyed by the front in the course of combat operations.

When this is the case, a different approach is necessary in the organization of combat with operational-tactical and tactical nuclear means. The point is that operational-tactical means have a great range, but it takes considerable time for them to prepare a strike from their launch site. Most tactical nuclear means can fire (launch) literally in a few minutes after occupying their firing (launch) site. However, because of their limited range of fire, they have to draw near our forces before firing. A fundamental deduction follows from this. In order to preempt the delivery of strikes by tactical nuclear means, we must strive to destroy them while they are still located at a distance exceeding their range.

It seems to us that in order to carry out this task it is advisable to define three lines of danger or of approach, which we have as yet designated only tentatively.

Line No. 1 (sketch 1) will probably extend from the enemy forward edge to a distance somewhat greater than the range of the tactical nuclear means having the greatest range (if the enemy has Honest John rockets, the distance will be about 30 kilometers, and with the adoption of the Lance

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missile system it will be 60 kilometers). Before the troops of our first army echelon advance to this line, our reconnaissance must discover, and our rocket troops and supporting aviation destroy, a large part of the enemy nuclear means whose range extends to this line. A front has at its disposal the means necessary to accomplish this.

Line No. 2 will obviously be 8 to 12 kilometers from the forward edge of the enemy defense, i. e., at a distance equal to the range of his nuclear artillery. Before the large units of the first echelon of our attacking forces advance to this line, a large part of the remaining enemy nuclear artillery within the zone of the front must be destroyed or reliably neutralized. This task, too, can be fully accomplished if there is efficient and timely concentration of the efforts of the reconnaissance elements and the means of destruction of the divisions, the armies, and the front.

Line No. 3 can be fixed at 2 to 3 kilometers from the line of contact of the two sides, i. e., at a distance equal to the range of weapons of the Davy Crockett type. This is also the line of attack for our forces. With their advance to this line, our attacking forces must use all of their fire means to destroy the tactical nuclear antitank means which have survived our nuclear strikes and must go over to a vigorous attack in order to effect a total rout of the enemy.

Thus, before the large units of the first echelon of our attacking forces approach to within 60 to 65 kilometers of the enemy, tactical nuclear means of the Lance type must be revealed and destroyed; this distance is respectively 30 to 35 kilometers for the Honest John and 10 to 14 kilometers for most of the 155-mm howitzers. In this case, then successive destruction, starting with the long-range means, will enable us to preempt the enemy delivery of nuclear strikes and to preserve our forces and means.

As long as our probable enemies had an insignificant number of tactical nuclear means, our side correctly considered the division to be the focal point for operating against them. Now, however, when the quantity of these means has increased sharply and they have become a factor of operational importance, it is possible to carry out the preemptive destruction of enemy tactical nuclear means (those which survive our initial nuclear strike) only through the combined efforts of operational-tactical forces and means. In this case it is advisable to establish the army as the level for organizing and carrying on combat not only against enemy operational-tactical nuclear means but also against his

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subunits of tactical missiles and nuclear artillery.

The methodology we propose for organizing combat against tactical nuclear weapons in an operation stipulates that they be reconnoitered and destroyed not only when we are attacking an enemy who is on the defensive but also when the forces of the two sides are approaching each other and when the enemy is advancing to attack or to deliver a counterstrike. The main point is the necessity to reconnoiter (make a final reconnaissance of) the target nuclear weapon and to organize its destruction before our forces come within its range.

In support of combat against enemy tactical nuclear means, we should tentatively designate two zones, as the opposing sides approach each other, directly in front of the main forces of the first echelon of combined-arms large units: a zone of deep reconnaissance, in which nuclear weapons must be discovered; and a zone of final reconnaissance and destruction for refining our information and destroying these weapons before our forces come within their range.

The zone of deep reconnaissance must be large enough to provide for discovering tactical nuclear means before they reach the zone of final reconnaissance and destruction. The minimum distance of its outer limit (G_{razv}) from our troops can be expressed by the equation

$$G_{razv} = D_p + (V_p + V_n)(t_{razv} + t_{inf} + t_{resh} + t_{got} - t_{pr}),$$

- where D_p - range of enemy tactical nuclear means;
 V_p - speed of advance of enemy tactical nuclear means;
 V_n - rate of advance of our forces;
 t_{razv} - time necessary to reconnoiter a given type of enemy tactical nuclear means;
 t_{inf} - time needed to receive and process reconnaissance data and report to the formation commander;
 t_{resh} - time required for formulating a plan, making preparations, and transmitting orders for destruction;
 t_{got} - time needed for our means to prepare and deliver a strike;
 t_{pr} - time needed for a given enemy means to prepare for a strike.

The outer limit of the zone of final reconnaissance and destruction (G_{dp}) will be separated from our forces by a distance equal to the range of the enemy tactical nuclear means plus the distance which our forces (or the enemy means of nuclear attack, or the two together) will cover in the time spent on final reconnaissance, the transmittal of reconnaissance

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information, the formulation of a plan, and the destruction of the nuclear means. The equation has the following form:

$$G_{dp} = D_p + (V_p + V_n)(t_{inf} + t_{resh} + t_{got} - t_{pr}).$$

The specific figure for the depth of the reconnaissance zone or the zone of final reconnaissance and destruction under different conditions can be determined using the nomogram (sketch 2).

One of the ways enabling us to reveal the enemy in time to deliver a preemptive strike with tactical nuclear weapons is the purposeful organization of reconnaissance with a periodicity which has been calculated in advance.

Considering the short fire (launch) preparation time of this type of weapon and the limited range, the periodicity of reconnaissance must be such as to assure the capability of discovering tactical nuclear weapons while they are still in transit, before they enter the zone of final reconnaissance and destruction. This can be achieved if the repeated observations of the routes of advance of enemy forces take place within the time interval P, which must be less than the time necessary for the enemy to negotiate the zone of deep reconnaissance. The time P is determined as the quotient of dividing the depth of the reconnaissance zone by the speed with which the enemy nuclear weapon is approaching our forces. For example, if the concentration area of the enemy army reserve is located 100 kilometers from our forces, if the reserve is advancing at 20 kilometers per hour, and if the depth of the zone of final reconnaissance and destruction is 20 kilometers, then reconnaissance of the tactical nuclear means in the reserve must be conducted to a depth of $100 - 20 = 80$ kilometers, with a periodicity

$$R_{\frac{80}{20}} = 4 \text{ hours.}$$

The methodology will be similar in determining the periodicity of reconnoitering tactical nuclear means if both sides are moving toward each other. In this case, however, the size of the zone of deep reconnaissance changes continuously, and the intervals between successive observations of this zone will be unequal. The maximum allowable time P between each two successive observations must be determined individually by finding the difference between the distance separating the two sides at a given moment and the depth of the zone of final reconnaissance and destruction and then dividing this figure by the speed with which the enemy tactical nuclear means and our forces are approaching each other. If, for example, the

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original distance between the sides is 150 kilometers and the size of the zone of final reconnaissance and destruction of a given type of nuclear weapon is 30 kilometers, then if both sides are advancing at 20 kilometers per hour the interval for observing possible routes of advance of the means must be

$$P \approx \frac{150 - 30}{20 + 20} = 3 \text{ hours.}$$

Second to reconnaissance as a major task in operating against enemy tactical nuclear means of attack is organizing their destruction. Of the many means and methods of destroying nuclear weapons, let us devote our attention to the capabilities of detachments transported by helicopter.

It is known that the employment of airborne landings for this purpose presents certain complications because of the time needed to prepare a landing operation, the difficulties of overcoming enemy air defense during the flight and landing, and the characteristics of conducting combat actions in the rear. The organization, preparation, and landing of airborne forces usually take several hours. Thus, according to the experience of training exercises, 15 to 20 minutes are spent in enplaning a battalion-sized tactical airborne landing force without its combat equipment, 40 to 50 minutes in loading and lashing down heavy combat equipment, and about an hour in flying the landing force a distance of up to 150 kilometers. At least 4 to 5 hours are required for a landing, from the moment the task is received until the actual landing of the force, assuming that the crews have been formed in advance. Therefore, a landing force can hardly destroy such mobile means of nuclear attack as, for example, operational-tactical missiles, in a given area before their launch, let alone tactical nuclear means.

The appearance of helicopters equipped with various systems of missile, fire, and other weapons, will make it possible to utilize motorized rifle subunits capable of carrying out the above-mentioned tasks within a short time. Such subunits, in our opinion, will be the most suited to operations under modern conditions. They can carry out attacks from the air, and after landing can alternate movement by air with actions on the ground.

In our view, armed helicopters will provide not only for continuous transportation of personnel but also for carrying out fire missions from the air. Their armament may consist of a fixed or movable missile complex, antitank guided missiles, grenade launchers, various incendiary means, smoke-generating equipment to blind the enemy, etc. Helicopter gun ports

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and hatches should be equipped so that the fire means of subunits being transported can be employed from the air.

To equip a motorized rifle company acting as such a detachment will require 5 to 6 helicopters of the V-8 and V-2 type or 10 to 12 helicopters of the MI-4 and MI-1 type. It is obvious that this type of detachment will usually be drawn from a division at the present time. As shown by the experience of training exercises and war games, a front may have one to two helicopter regiments at its disposal and an army may have a helicopter squadron. If an army is reinforced with an additional one or two squadrons of helicopters, one or two of the above-indicated detachments may be formed in divisions of the first echelon; as the stock of helicopters increases, detachments may reach the numerical strength of a motorized rifle battalion, and to equip them will require 20 to 25 helicopters of the V-8 and V-2 type or 40 to 50 of the MI-4 and MI-1 type.

The promising prospects of helicopter detachments for combat, first and foremost against tactical nuclear means, are caused not only by the special importance of this task but also by the high combat effectiveness of the detachments because of their mobility and their relative independence of terrain conditions and zones of destruction, fires, floods, and radioactive contamination which may develop there. The maneuverability of the detachments if they fly into the area of their task, which is usually not at great depth, will enable them, coming in at very low altitudes, to exploit terrain irregularities and thus substantially reduce the effectiveness of enemy air defenses.

If such detachments are at full combat readiness they can attack nuclear objectives on an average of 20 to 30 minutes after being assigned the task (boarding helicopters and landing will take 6 to 8 minutes for a subunit of company strength, the takeoff of a squadron will take 1 minute, and a flight to a distance of 20 to 30 kilometers will take 10 minutes).

For operating convenience, a detachment may be divided into two groups: an assault group made up of motorized rifle subunits aboard 3 or 4 helicopters to attack objectives from the air or after landing; and a fire group made up of 2 or 3 detachments aboard 2 or 3 helicopters to support the assault group and cover it from surprise enemy attacks. Helicopters of the fire group must carry an increased supply of munitions in order to make repeated fire runs on enemy objectives.

As a result of the shallow deployment of tactical nuclear means from the line of contact of the two sides, the operating depth of such a

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detachment may be put at 15 to 30 kilometers. The inclusion in a detachment of helicopters with powerful onboard armament makes it possible to count on a minimum allotment of means to support and cover the detachment's actions. Thus, the experience of training exercises has established that two MI-4 and four MI-1 helicopters equipped with missiles are able to neutralize the enemy over an area of 4 to 6 hectares with one salvo.

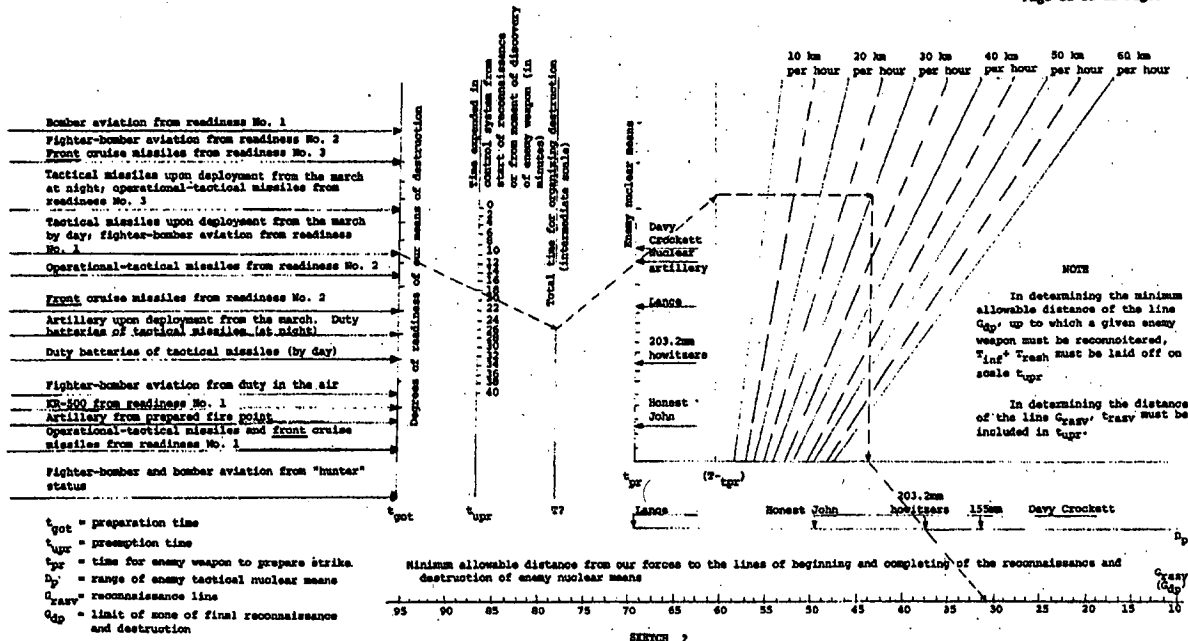
As is shown by the experience of American forces combat operations in South Vietnam, where armed helicopters are in fairly wide use, fire strikes are delivered from them at a distance of 35 meters or more in front of the advancing forces. In this case, the coordinates of the targets which must be destroyed first are transmitted by radio from the ground to the commander of the group of armed helicopters. Part of the objectives are hit from the air as they are discovered by the crews. The great effectiveness of firing from helicopters served as the basis for development by the Americans of the so-called "air fire system" - a large high-speed helicopter, armored and heavily armed.

The inclusion in the helicopter detachments we are proposing of similar "air fire systems" would probably prove an effective means of destroying nuclear objectives and supporting motorized rifle subunits.

In discussing the role and significance of existing and new means and methods for combat against enemy nuclear weapons, and the long-range prospects for their development, it must be taken into account that we can achieve the goal of this combat through close coordination in the employment of all the forces and means which are, or in the near future will be, at the disposal of the front, the army, and the division for conducting operations and combat.

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