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MEMORANDUM FOR: The Director of Central Intelligence

FROM : William W. Wells
Deputy Director for Operations

SUBJECT : MILITARY THOUGHT (USSR): Some Problems in the Control of the Rocket Troops of a Reserve Front During Its Movement Forward for Commitment to an Engagement

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 is a review of various matters connected with the control of the rocket troops of a reserve front which is being committed to battle after a war has begun. The authors cover such problems as timely supply of missile propellant, movement to areas not planned for in advance, and organizing and maintaining continuity of communications. The tasks of the rocket troops during their movement, including the delivery of nuclear strikes, are touched upon, as are procedures for organizing the march itself, reconnaissance problems, the content and transmission of combat instructions, and the role of proposed planning and control groups. This article appeared in Issue No. 2 (75) for 1965.

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

William W. Wells

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Intelligence Information Special Report

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SUBJECT

MILITARY THOUGHT (USSR): Some Problems in the Control of the Rocket Troops of a Reserve Front During Its Movement Forward for Commitment to an Engagement

SOURCE Documentary

Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 2 (75) for 1965 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". The authors of this article are General-Mayor of Artillery P. Zherdev, Colonel G. Komarov and Lieutenant Colonel I. Yashin. This article is a review of various matters connected with the control of the rocket troops of a reserve front which is being committed to battle after a war has begun. The authors cover such problems as timely supply of missile propellant, movement to areas not planned for in advance, and organizing and maintaining continuity of communications. The tasks of the rocket troops during their movement, including the delivery of nuclear strikes, are touched upon, as are procedures for organizing the march itself, reconnaissance problems, the content and transmission of combat instructions, and the role of proposed planning and control groups.

End of Summary

[redacted] Comment:

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Some Problems in the Control of the Rocket Troops of a Reserve Front During Its Movement Forward for Commitment to an Engagement

by
General-Mayor of Artillery P. Zherdev,
Colonel G. Komarov
and
Lieutenant Colonel I. Yashin

In examining the questions of organizing and implementing control of rocket troops during the movement forward of a reserve front, we shall proceed from the following conditions: the movement forward of the front is being carried out from the interior of the country in a situation of war already begun, for the purpose of subsequently committing the front to an engagement from the march.

The experience of a whole series of exercises has shown that under such conditions, control of the rocket troops of a reserve front must provide for: first, prompt and secure warning and bringing to full combat readiness of the missile and missile technical large units and units and their removal from permanent deployment points, and also their all-round preparation in short periods of time for an extended march; second, maintenance of high combat readiness of the missile and missile technical large units and units and their organized carrying out of the march under conditions of enemy delivery of nuclear and chemical strikes when it is necessary to negotiate, during the march, areas of destruction and extensive zones of radioactive and chemical contamination; third, timely deployment of the missile and missile technical large units and units in siting areas and their quick preparation for delivery of nuclear strikes when the situation is changing rapidly and especially when the troops of the front are being committed to the engagement.

Having no little significance in the control of missile and missile technical large units and units while bringing them to full combat readiness is their warning by transmission of the established signals in the shortest possible times. Basically, this problem already has virtually been solved in the troops. We should just mention the necessity of having, for the purpose of

shortening the time, a single automated system for simultaneous warning of all the missile large units and units of the front (military district) over several channels.

Calling for special concern is the timely receipt by the missile large units and units of missiles and missile propellant. For this, it is necessary first of all to establish close cooperation between the missile and missile technical units and the units (depots) that store and deliver the missile propellant. On the solution of these particular problems, as experience has shown, must be concentrated the attention of the commander and staff of the front and also of the chief of the rocket troops and artillery and his staff.

Considering that the receiving of reserves of missiles, warheads, and missile propellant is a rather complex and lengthy process, we believe it advisable in missile and missile technical units to set up storage for reserves of missiles in peacetime, if only in such quantity as corresponds to their transportation capabilities. In this case, not only will the time be shortened for bringing the rocket troops to full combat readiness, but the dependability of this readiness will increase considerably, since the missile brigades and battalions will be making the march having ready missiles.

For those missile and missile technical large units and units in which missile warheads and missile propellant cannot be kept in peacetime for some reason, the military district staff must determine in advance the procedure for receiving them, down to providing the units beforehand with the appropriate documents (requisitions) with indication of receiving times and delivery routes.

Certain circumstances may require moving at a combat alert signal large units and units to areas not planned for in advance. Such a variant must also be foreseen earlier. In this case it will be necessary to plan appropriately the procedure for warning the troops, and for assigning tasks to the commanders of the missile large units and units or refining their tasks. Considering that also in this case the permanently operating radio nets will be used, it will be necessary to establish a special signal and also to work out a single orientational map with a coded grid so that this signal is quickly apprehended by

the executors. The instruction to the commander of the large unit and unit may be sent in the form of a short radio message composed on the basis of a previously worked out special standard document. In the radio message it is enough to indicate, in accordance with the coded grid of the orientational map, the established signal, the concentration area of the large unit or unit not planned earlier, the route (according to points plotted on the map), and the time to carry out the instruction.

From each missile large unit and unit, on being alerted by a combat alert signal and moved out to areas not planned for in advance, are sent out previously formed (this also has to be provided for in the plan) reconnaissance groups for the selection of concentration areas, reconnaissance and preparation of routes, and also a team of traffic controllers.

It seems to us that in the staffs of missile large units and units it is necessary to have previously prepared sets of topographic maps for any axis within radius of a day's march from the permanent deployment point. These sets must be in such condition that they can be quickly given out to the commanders of subunits upon declaration of a combat alert. But this is still not enough. All the main possible routes of movement in any direction from the permanent deployment points should be gone over beforehand with the officer personnel of the missile units and large units.

In carrying out control of the rocket troops while they are being brought to full combat readiness, the commander of the front, through his staff and also through the chief of rocket troops and artillery, as under other conditions, refines the tasks for their all-round support, especially for the organization of protection against weapons of mass destruction, reinforcement of security, and engineer preparation of the concentration areas. A special concern of the staff of the front in this period must be the timely organization of stable communications, without which the organized movement and deployment of the missile brigades and battalions in concentration areas is impossible.

The experience of many exercises conducted in the troops of the Belorussian Military District testifies that the basic, and often the only, means of communications with missile and missile

technical large units and units during the period of bringing them to full combat readiness and during their preparation for the march, is radio. The transmission of nearly all instructions, the collection of data on the status of the rocket troops, and also cooperation between the missile and missile technical large units and units, are carried out chiefly with the use of radio means.

In this connection, the staff of the front, and also the staff of the rocket troops and artillery, in the practice of everyday combat training, must systematically organize training in coordinating radio nets. In missile and missile technical large units and units there have to be permanently assigned crews that work on the nets and links of the staff of the front, just as in the front communications units there have to be crews permanently assigned to these nets and links. This requires prior preparation of secure communications equipment, in particular of coding machines, mutual tuning of this equipment for all the radio sets operating on radio links with the missile and missile technical units and large units, and extensive use of various automatic devices. Nor must one fail to mention the necessity of advance working out and distribution to rocket troops of special signal tables and also of standard instruction and report forms.

In the publications it has already been said more than once that the questions of communications with the rocket troops are still far from resolved. For instance, communications personnel who are placed, for the time of exercises, at the disposal of the staffs of the rocket troops and artillery of the front and armies have to work, as a matter of fact, on newly set up radio nets and radio links. In such a situation, much time is usually lost during which the radio operators are getting accustomed to one another, beginning to understand one another, as it were.

The communications system of the front is organized, as we know, ahead of time. For stable communications with the rocket troops, based on the experience of exercises, it is most desirable to organize the following radio links (morse and printer): command post and forward command post of the front -- each missile brigade and separate missile battalion of front subordination; chief of rocket troops and artillery of the front -- chief of missile and artillery armament. Radio nets of the

chief of rocket troops and artillery of the front are also formed that include the radio sets of the commanders of the army missile brigades and of the chiefs of rocket troops and artillery of the armies (figuring one net for one or, at most, two armies). Besides that, the staffs of the rocket troops and artillery of the front and armies must have radio means for direct communications personally with the commanders of the missile battalions forming a part of the missile brigades of front and army subordination.

To control the missile technical units, the chief of missile and artillery armament of the front also needs radio nets: one net for two or three missile technical units of front subordination, and one net to one or two armies for communications with the chiefs of the missile and artillery armament departments of the armies, the army mobile missile technical base, and the front mobile missile technical base supporting the army.

The experience of exercises has shown that at the command post and forward command post of the front it is necessary to have reserve sets so that a subscriber can at any time be switched from the radio net onto a radio link.

The conditions of moving a reserve front forward over great distances in a situation where the military actions of the sides have already begun have a considerable effect on the control of troops during the march; like the control of all other troops, it is organized on the basis of the decision of the commander of the front for movement, which he makes in conformity with the directive of the General Headquarters of the Supreme High Command.

In the part of the decision dealing with the movement forward of the rocket troops are usually determined the objective and general tasks of the march, the grouping of troops in the area of commitment of the front to the engagement and the time of forming the grouping, the times the missile brigades and battalions are to be ready to deliver nuclear strikes, the number of missiles to be issued them with nuclear and chemical warheads and the times they are to be prepared for launch. Directly concerning the march of the rocket troops, in the decision are indicated the method and order of their movement, the routes, the

number of day's marches and the average length of them, the beginning of the march and time of passing movement phase control lines (points), and measures for support of the march.

The basic tasks of the rocket troops during the movement forward of a reserve front consist in their arriving on time at the assigned siting areas, quickly occupying them, and, in cooperation with the rocket troops of the fronts operating forward and with the aviation, delivering a massed nuclear strike for the purpose of decisively destroying the nuclear means, aviation, and main grouping of ground forces of the enemy. This brings about favorable conditions for the deployment of the troops of the front, their commitment to the engagement from the march, completion of the defeat of the enemy, and successful conduct of the front operation.

Massed strikes have already been discussed in our military press, and we will not dwell on them. Let us merely mention that under certain conditions it is precisely a massed strike that is necessary to decisively build up efforts or abruptly change the situation in our own favor and develop the offensive at high speeds. A massed strike is especially necessary if, by the time of deploying the troops of the reserve front, the situation has developed in favor of the enemy, who will be able to seize the initiative and undertake aggressive actions himself.

To deliver a massed nuclear strike under these conditions, the rocket troops must in advance, even before the deployment of the advancing troops of the front, not only occupy siting areas but also get completely ready for a launch.

On the matter of how and when to move the missile brigades and battalions forward there exist the most diversified opinions. In our view, one thing is incontrovertible: their movement forward must be organized with a lead of at least one or two days relative to the times of completing the march and deploying the main forces of the front. Such a lead also has to be maintained by the missile technical units, which, on arrival in the deployment area, must immediately begin checking out and assembling the delivery missiles and the warheads to them. On this basis is also determined the place of the missile and missile technical large units and units during the movement of the troops of the front. It seems to us that, in making the

march under their own power, the missile and missile technical large units and units should move immediately behind the march security forces or, in individual cases -- ahead of them. It stands to reason that in this case the missile and missile technical large units and units have to be reinforced with motorized rifle units and subunits for their immediate security on the march and also be covered by the air defense means.

For effective delivery of a massed nuclear strike, it is necessary, of course, to know the enemy targets to be hit. This requires appropriate reconnaissance data, which can be obtained first of all from the fronts operating forward. At the same time, the staff of the reserve front must also organize reconnaissance with its own means while still making the march. Unfortunately, this important question, which is an independent topic for research, still has not been treated in our publications. Offering special interest, as it appears to us, is the examination of the specific features of organizing reconnaissance on the march, of the effectiveness of various types of reconnaissance, and of the procedures for receiving, collating, and delivering reconnaissance data to the authorities concerned for the purpose of timely preparation of a massed nuclear strike.

It should be taken into consideration that when the rocket troops are making a march under their own power (and this is the basic method of regrouping them), the employment of heavy-load trailers will be required. The experience of exercises has shown that the average moving speed with the use of MAZ-537 prime movers amounts to an average of up to 25 kilometers per hour at night and 30-35 kilometers per hour by day. With this, the length of a day's march may be up to 250 kilometers. A day's march of the units that have launchers on wheeled mountings (separate missile brigades), under favorable conditions, reaches 300 kilometers per day with an average march speed equal to 35-40 kilometers per hour.

Based on this, the staff of the front, jointly with the chief of rocket troops and artillery and his staff, on the basis of the decision made by the commander of the front, plans the march (regrouping) of the rocket troops and issues combat instructions to the missile and missile technical large units and units.

We will recall that in the combat instructions (and this is confirmed by the experience of exercises) should be indicated brief conclusions from the assessment of enemy actions, the nature of the combat tasks which the missile brigades and battalions have to accomplish not only at the end of the march but also during it, and the routes and order of movement of the troops. In the instructions must also be indicated the time of finishing the march, the siting areas, the time of deployment of the rocket troops in them, and their time to be ready for a missile launch. Besides that, it is necessary to determine the procedure of crossing movement phase control lines and water obstacles in cases of the destruction of crossings, and also of bypassing areas of destruction and radioactive contamination of the terrain.

It is necessary to indicate to the missile technical units (to the extent that it can be foreseen from the situation that has taken shape) the tasks of preparation and assembly of the missiles and their delivery to the missile large units and units, and to indicate to the missile units and large units -- the order and times for receiving the missiles.

We should like to emphasize the importance of the timely, first-priority assignment of tasks to the missile technical units, inasmuch as, in practice, they are still not always assigned on time and correctly. This is occasioned by the fact that it is sometimes forgotten that missile technical support is not exclusively a rear services problem but a very important operational one, and the front commander and his staff, together with the chief of rocket troops and artillery and his staff, must personally concern themselves with it.

In the instructions to the missile and missile technical large units and units, it also is necessary to indicate the procedure for support of the march, and also questions of organizing control, including the places for accommodating the command post, forward command post, and operations groups of the front during the movement by lines and time periods, and also the time and procedure for submitting reports.

From what has been said, it is obvious that the number of matters that must be transmitted to the commanders of missile brigades and battalions and missile technical units is very

large. Taking into consideration that the transmission of combat instructions, as we have already said, is done mainly by radio in the form of radio messages, we believe it advisable to suggest the following.

First, to draft combat instructions in such a way that the executors receive orders in the form of separate matters successively, as they have to be carried out. For example, in the first combat instructions for each missile brigade are determined the general tasks for the march, the routes of movement, and the times of passing control points. Having received such orders, the brigade commanders can give out preliminary instructions to the units about preparation for the march and devote themselves to defining the task, assessing the situation, and making decisions for the march, while the staffs will be able to set about planning and performing calculations for the march.

Then the commanders of the missile brigades are given orders on the procedure of movement and support of the march, on missile technical support, the procedure and time of deployment and readiness for the launch of missiles, etc.

Such a procedure for transmitting instructions makes them still shorter and facilitates getting the tasks to the large units and units by radio. With this, the load on the technical means of communications is distributed more evenly, but the main thing is that time is gained for carrying out the decision of the commander of the front.

Second, with any procedure for transmitting the decision of the front commander to the missile brigades and battalions and the missile technical units, the instructions sent by radio must be sure to be backed up by sending officers of the staff of the rocket troops and artillery out to the large units and units or by sending written documents using messenger means of communications. Unfortunately, in the practice of exercises, this still is not always done. Sometimes they limit themselves without good reason to written documents alone; therefore, there are cases of tardy transmission of instructions to the executors.

Third, the staff of the rocket troops and artillery must devote itself to immediate working out and transmission of combat

instructions both during the organization of the march and subsequently during its conduct. For this we consider it advisable, using officers of the operations department, to form two groups: a planning group made up of four or five officers, and a group for control.

The officers of the planning group participate directly in working out proposals for the front commander about the organization of the march of the rocket troops, in drawing up, in conjunction with the operations directorate, the decision of the commander for the movement forward of troops, and in working out the regrouping plan. This same group works out a map of the regrouping of the rocket troops of the front and maintains it during the entire movement of the troops.

The officers of the control group are allocated by axes, each of which involves a missile brigade or a separate missile battalion. The main tasks of this group are working out, drawing up, and transmitting combat instructions to the large unit or unit on their own axis, collecting data on their status, preparing proposals on matters of their combat employment and also monitoring the fulfilment of instructions issued.

At the staff of the rocket troops and artillery it is necessary to have a group of officers from the directorate of missile and artillery armament of the front, which must prepare, in short periods of time, sound calculations on the missile technical support of the troops for the period of the march, take part in planning the march of the missile technical units, draft and transmit to them the necessary combat instructions on the basis of the decision of the troop commander, and also monitor their fulfilment.

It should be taken into consideration that already during the march, including during its conclusion, the situation may change abruptly in the enemy's favor, which will require the deployment of all or a certain part of the rocket troops to deliver nuclear and chemical strikes. Therefore, in the process of moving troops forward it becomes necessary not only to systematically collect and study data on the situation and status of the large units and units of rocket troops, but also to assign and refine the combat tasks for them in good time.

If in the beginning of the march the refinement of tasks usually comes down to changing routes, refining the times of individual marches and the procedure for materiel-technical support, etc., in the final stage of the march, the tasks of delivering nuclear and chemical strikes can already be assigned or refined, i.e., the tasks directly according to the plan of the impending operation of the reserve front being committed to the engagement or in support of the fronts operating forward if the situation requires this.

It is necessary to keep in mind that carrying out control during the march, when the command posts of the brigades and battalions are being relocated simultaneously, is extremely complicated, since the existing means of communications do not provide communications at great distances on the move. And the use of messenger means (helicopters) for communications is, to a certain degree, limited, inasmuch as marches basically are made under night conditions.

Therefore, in organizing control for the time of the march, it is necessary to provide for a number of measures that ensure the continuity of communications with the commanders of the large units and units of the rocket troops of the front. In particular, considering that the control posts of the front will be moving during the march in echelon, it is advisable that the staff personnel of the rocket troops and artillery be allocated among the command post, the forward command post, and the operations groups of the front staff. The operations groups absolutely must have radio and messenger means specially for communications with the missile and missile technical large units and units. The officer missile specialists within the operations groups must have the necessary radio data so that, if they have a limited number of radio sets at their disposal, they can, at the necessary moment, get into any radio net or radio link that includes the radios of the missile and missile technical large units and units.

If maintaining continuous radio communications with the large units and units on the march does not work out, radio traffic sessions should be organized. They can be used by the commanders of the missile large units and units for reports, and by the staff of the rocket troops and artillery for transmitting instructions to the executors. For such radio traffic, it is

necessary to determine in advance the time and lines for setting up the radio sets of the staff of the rocket troops and artillery and the missile brigades and battalions, and also to establish the duration of their manning in the places where they are set up and on the march routes. Experience has shown that, with good organization of radio traffic, the stops and setting up of radio sets have almost no effect on the rates of march.

In the operations groups of the front staff that are sent out to the staffs of the fronts operating forward should be included officers of the staff of the rocket troops and artillery. They must collate data on the nuclear strikes delivered against enemy targets by the means of the operating fronts, refine the data on their capabilities, study the terrain and whether it is provided with a topogeodetic grid, for the purpose of determining the possible deployment areas of the missile and missile technical large units and units of their own front. Besides that, if resubordination of operating armies or divisions to the reserve front is foreseen, these officers collate all the necessary data on the combat strength of their rocket troops.

The areas and times of deployment of the missile technical units during the march must be specified in such a way that, by the moment of commitment of the troops of the front to the engagement, they will be able to prepare and supply the missile large units and units with the necessary number of missiles which will suffice for at least two or three days of the operation. If it is desirable to have the missile technical units of the operating fronts participate in the preparation of missiles when necessary, all that is required is to coordinate this matter beforehand with the commanders of the fronts.

The staff of the rocket troops and artillery must constantly have accurate data on the number of missiles in the missile technical and missile large units and units, and on the times for completing their assembly, preparation, and delivery. For this purpose, in exercises, an appropriate report system has been worked out and practiced according to which each missile technical unit reported at an established time to the staff of the rocket troops and artillery of the front about the completion of the assembly and preparation of its available missiles, their dispatch to the missile large units and units, and the receipt of

missiles from the central point. The missile large units and units in turn report on the receipt of each missile and the time of dispatching the unloaded transport vehicle to the mobile missile technical base of the front. The reports must be transmitted, as a rule, over the technical means of communications at "above precedence", just like the commands for carrying out the launch of missiles.

Such are a few observations on the questions of control of the rocket troops of a reserve front during its movement forward for commitment to an engagement. It seems to us that this timely and complex topic requires further working out and discussion on the pages of the Collection and exchange of the experience of operational exercises of the military districts, as well as of special exercises conducted with the rocket troops.