TOP SECRET [redacted]

[redacted]

3793

CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

25 May 1978

[redacted]

MEMORANDUM FOR: The Director of Central Intelligence

FROM : John N. McMahon
Deputy Director for Operations

SUBJECT : MILITARY THOUGHT (USSR): Negotiation of Broad Zones of Radioactive Contamination and Sectors of Destruction During the Regrouping of Troops of an Army

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 synopsis of a conference held in the 28th Army of the Belorussian Military District which dealt with questions of negotiating zones with high levels of radiation. Among the items discussed were the methods of carrying out this negotiation, which included bypassing the zones altogether, using axes with the lowest levels of radiation, and negotiating small zones from the march. Other matters touched on were measures for protecting the troops during the negotiation by setting up a warning network to report on the radiation situation and the assessment of irradiation of personnel and decontamination of them. The organization of troop control, which will largely be carried out by radio communications, was briefly discussed also. This article appeared in Issue No. 2 (63) for 1962. [redacted]

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]

[redacted]

John N. McMahon

[redacted]

Distribution:

The Director of Central Intelligence

The Director of Intelligence and Research
Department of State

The Joint Chiefs of Staff

The Director, Defense Intelligence Agency

The Assistant to the Chief of Staff for Intelligence
Department of the Army

The Assistant Chief of Staff, Intelligence
U. S. Air Force

Director, National Security Agency

Deputy Director of Central Intelligence

Director of the National Foreign Assessment Center

Director of Strategic Research

Director of Scientific Intelligence

[redacted]

Intelligence Information Special Report

COUNTRY USSR [redacted]

DATE OF INFO. Early 1962

DATE 25 May 1978

SUBJECT

MILITARY THOUGHT (USSR): Negotiation of Broad Zones of Radioactive Contamination and Sectors of Destruction During the Regrouping of Troops of an Army

SOURCE Documentary

Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 2 (63) for 1962 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". The authors of this article are General-Mayor Ye. Kuzmenko and Lieutenant Colonel V. Rusakov. This article is a synopsis of a conference held in the 28th Army of the Belorussian Military District which dealt with questions of negotiating zones with high levels of radiation. Among the items discussed were the methods of carrying out this negotiation, which included bypassing the zones altogether, using axes with the lowest levels of radiation, and negotiating small zones from the march. Other matters touched on were measures for protecting the troops during the negotiation by setting up a warning network to report on the radiation situation and the assessment of irradiation of personnel and decontamination of them. The organization of troop control, which will largely be carried out by radio communications, was briefly discussed also.

End of Summary

[redacted] Comment:

[redacted]62 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. [redacted]

[redacted]

Negotiation of Broad Zones of Radioactive Contamination and Sectors of Destruction During the Regrouping of Troops of an Army

by

General-Mayor Ye. KUZMENKO
Lieutenant Colonel V. RUSAKOV

In the 28th Army of the Belorussian Military District a conference was held on the theme "Negotiation of Broad Zones of Radioactive Contamination and Sectors of Destruction During the Regrouping of Troops of a Combined-Arms Army Towards the Front Line in the Initial Period of War."

Opening the conference, the commander of the army, General-Leytenant of Tank Troops FOMICHEV said that the timeliness of the theme consists in the fact that, independently of the nature of the beginning of combat actions, the first type of combat activity of an army may be its regrouping over a great distance, during which the troops will have to negotiate zones with various levels of radioactive contamination and sectors of destruction.

In the main report and the speeches of participants of the conference, the main attention was devoted to an examination of the following questions.

Methods of negotiating zones with high levels of radiation. The participants of the conference came to the conclusion that the basic methods may be bypassing, negotiation along axes with the lowest levels of radiation, and negotiation from the march after some drop of the radiation levels.

Bypassing of zones of radioactive contamination and destruction can be done by troops in that case when there is a possibility for maneuver and carrying it out requires less time than waiting out the natural drop of radiation levels. Besides that, this method may also occur when the radiation levels in the zone of contamination are extraordinarily great and the zone itself has a great depth and the attempt to negotiate it even in tanks after some drop of the radiation levels can lead to overexposure of personnel to radiation.

Bypassing of zones of contamination can be carried out both to one side and simultaneously to both sides. Therefore, troops doing a regrouping in anticipation of the negotiation of zones of radioactive contamination must occupy a zone not less than 120 to 130 kilometers wide in order to ensure great freedom for maneuver.

Negotiation of zones of contamination along axes with the lowest levels of radiation requires having, already before the approach of the troops to the zone, reliable data about the levels of radiation and the nature of destruction on the proposed axes of movement. This is very important for determining the make-up of the columns so as to ensure their movement at maximum speeds. Such a method can be employed when the bursts of enemy nuclear warheads are produced in a disjointed manner and considerable sectors with low levels of radiation develop between them.

Troops will negotiate zones of radioactive contamination from the march in those cases where the zone is not great in depth, the radiation levels in it are not high, and bypassing it is impossible due to terrain conditions or for other reasons.

Troops carrying out a regrouping may also encounter such zones of radioactive contamination which cannot be negotiated from the march in view of the high levels of radiation and bypassing of which is either impossible because of conditions of the terrain and the situation or inadvisable because of the great loss of time. In such cases it is more advantageous to negotiate the zones, after some drop of radiation levels, with all the forces of the large unit simultaneously or successively (in the beginning with tank units and then with the remaining units and subunits).

It should be kept in mind that the drop of radiation levels in the first hours after ground nuclear bursts proceeds rather rapidly (by a factor of six to eight in the first three or four hours). Therefore, the negotiation of zones of contamination by this method can be employed rather frequently, especially at night, when much time might be spent in completing a bypass.

It appears to us that, during a regrouping in a wide zone, the troops of an army will, to negotiate zones with high levels of radiation, as often as not employ all the indicated methods in combination: on one axis contaminated zones will have to be bypassed; on another, negotiated from the march; and on a third, negotiated on the axes with the lowest radiation levels.

The participants of the conference expressed the unanimous opinion that extensive use of aircraft and helicopters to negotiate the zones will hardly happen since such an undertaking, especially during a regrouping, is extremely hard to carry out.

Concerning forecasting of the radiation situation, the participants of the conference mentioned that to perform this work it is necessary in staffs to have authorized groups of the following sizes: in the staff of a divison, four or five men, and in the staff of an army, eight to ten men, keeping in mind their simultaneous work at forward command posts and command posts. Besides that, such groups of two or three men each must also be at rear control posts.

These groups should be entrusted with the tasks of forecasting and appraising the radiation situation, the collection of radiation reconnaissance data, the warning of troops, and the assessment of the irradiation of personnel. Besides that, they will prepare all the data for the report to the commander about the effect of the radiation situation on the troops and proposals concerning their next actions. To successfully fulfil the indicated tasks, the groups must be provided with special integrated equipment for forecasting the radiation situation, and with a staff bus or armored personnel carrier with all the necessary equipment and means of communications. With the aid of the integrated equipment or the vehicle, these groups will determine the parameters of nuclear bursts (place, time, yield, and type) and issue prepared maps or diagrams with the necessary data on the radiation situation.

Some peculiarities of organizing and conducting radiation reconnaissance. In examining this question, the participants of the conference stressed that at the present time the forces and means of radiation reconnaissance do not conform to modern requirements of the conduct of combat actions. It is necessary that troops have a special combat vehicle of increased cross-country capability with a high coefficient of radiation attenuation.

When carrying out a regrouping, the data of the radiation situation can be obtained from the extensive network of the deployed provost and traffic control service. For this, it must be provided with the appropriate means of conducting radiation and chemical reconnaissance and dependable means of communications.

Air defense of troops during the negotiation of zones of radioactive contamination must, as was mentioned in the speeches of participants of the

conference, be set up in the following manner: at the tactical level, by direct coverage of separate groupings of troops and rear installations, especially during their negotiation of difficult natural barriers; at the operational level, by area coverage of troops at more important lines such as major water obstacles and large population centers, in areas of day's halts, and in concentration areas. These two methods of coverage must be interconnected and closely tied in with the actions of fighter aviation, the air defense means of the country, and the troops operating forward.

Inasmuch as antiaircraft artillery can be employed only for coverage of separate small objects, the basic means of air defense will be missile units and subunits. Each troop surface-to-air missile battalion can cover troops over an area of 1,500 square kilometers, and an army missile regiment can ensure coverage of an area up to 7,500 square kilometers. Consequently, the capabilities of air defense will be determined chiefly by the availability of missile units, their grouping, and the organization of radar reconnaissance.

Acquiring great importance during the negotiation of zones with high radiation levels and of sectors of destruction is engineer support, especially engineer reconnaissance. It must be conducted in such a way as to provide the commander with data to a depth of not less than 100 to 120 kilometers, for which it is necessary to make wider use of helicopters, both those specially intended for this purpose and those equipped for conducting radiation reconnaissance. Engineer subunits intended for jobs in zones of radioactive contamination must be transported in helicopters. Besides that, it is necessary to judiciously organize the relief of personnel during the work periods, not allowing tolerable doses of irradiation to be exceeded. This relief of the subunits working on terrain contaminated with radioactivity obviously must also be done with the aid of helicopters.

Protection of troops during the negotiation of zones of radioactive contamination. Playing a large role in this matter is the warning of troops. A proposal was introduced to have for this purpose in a division a special post made up of one or two officers and four radio operators with an R-118A radio set and two R-105 radio sets. In all regiments and battalions R-311 receivers and RBN combat-vehicle radios with dynamic loudspeakers should be connected to the warning network with special attachments that automatically turn on the amplifier and a mechanical siren. It is best to have such a post on a helicopter, since when this is done the range of the available radio sets is increased. Besides the functions of warning, this post can receive and transmit to the troops

reconnaissance data and all the necessary signals for support of battle. Such a warning system was employed in one of the exercises with the 50th Guards Motorized Rifle Division. By using it signals were transmitted to battalions in 30 to 40 seconds, and to companies in one to two minutes.

Warning of troops travelling by railroad must be done through receivers connected to the general warning network of the army. For this purpose it is necessary to have receivers on every train and for the superintendents of stations to have receivers also.

Having special importance in the implementation of measures for the antiatomic protection of troops is the assessment of the radiation exposure of personnel. For it is important that, after negotiation of a contaminated zone, personnel be able to conduct combat actions for at least the next two or three days after negotiating the zone. Here it is necessary to take into account also the fact that, by the moment of negotiating the zone, personnel may have already had some dose or another of irradiation.

Assessment of the irradiation of personnel, as has already been mentioned, must be done by the groups for forecasting the radiation situation -- in the army for a regiment, and in the division for a battalion.

Many participants of the conference stressed that, to reduce the doses of irradiation of personnel, it is necessary to further perfect the means and methods of individual protection, to increase the protective properties of combat equipment, to work out special measures directed towards increasing the resistance of the body to radiation sickness, as well as technical means that ensure the quick performance of decontamination of personnel and equipment. For protection of the respiratory passages from radioactive dust it was proposed to have very simple ShB-1 leaf-type antidust means or respirator-type bandages.

As we know, at the present time the T-55 tank is equipped with an antiatomic protection system which, at the moment of an atomic burst, works automatically with the help of a gamma-ray sensor. But during the negotiation of contaminated sectors, it is impossible to determine with the help of this device where the limits of the contamination begin. Therefore, it is advisable to introduce changes in the design of the tank antiatomic protection system so that it works in the presence of radioactive contamination with radiation levels of not more than 0.5 roentgen per hour.

Some problems of troop control. In the opinion of the participants of the conference, to control troops during the negotiation of the zones there are necessary first, an operations group headed by the deputy formation commander (commander) and deployed on the other side of the zone of contamination for the purpose of controlling the troops who have negotiated the zone -- its transfer to the place of assignment is done in helicopters; second, a command post in front of the zone of contamination to control troops while negotiating the zones and to organize provost and traffic control service -- it is advisable to relocate it beyond the zone of contamination after the radiation levels drop or to bypass the zone; third, a rear control post to direct rear units when negotiating the zone -- it is relocated across the zone or around it together with the rear units.

The basic means of controlling troops when negotiating zones of contamination will be radio communications. However, the experience of exercises shows that the radio means available to staffs still do not fully ensure the control of troops, especially at the division-regiment level, or the maintenance of stable communications with all types of reconnaissance. It is necessary that the communications means of reconnaissance ensure its actions at a considerable distance from the troops (60 to 100 kilometers). Besides that, there is an urgent necessity to introduce among the troops secure communications attachments for radios, and with the introduction of which the need of a cumbersome system of secure control with the use of complex procedure tables disappears.

Summing up the work of the conference, General-Leytenant FOMICHEV stressed that it is necessary with still greater persistence to teach troops to operate under complex conditions of a situation with the negotiation of zones with high levels of radiation and sectors of destruction. By carefully training troops and staffs, as well as by working out special measures in advance, it is possible to drastically reduce the negative effects of radioactive contamination of the terrain, lower the level of irradiation of personnel, and ensure the successful accomplishment of the tasks confronting the troops. Among such measures it is primarily necessary to class thorough study and assessment of the radiation situation when organizing and conducting a regrouping, development of new methods of regrouping that meet the conditions of a complex radiation situation, improvement of the individual means of protection of personnel and the protective properties of combat equipment, conduct of a whole array of measures directed toward increasing the resistance of the body, as well as the production of new technical means that ensure quick performance of the decontamination of personnel and technical equipment.