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CENTRAL INTELLIGENCE AGENCY
WASHINGTON 25, D.C.

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MEMORANDUM FOR: Director of Central Intelligence

SUBJECT : MILITARY THOUGHT: "Some Conclusions on the NATO Armed Forces' Exercise SIDE STEP", by Colonel-General S. Ivanov

1. Enclosed is a verbatim translation of an article which appeared in the TOP SECRET Special Collection of Articles of the Journal "Military Thought" ("Voyennaya Mysl") published by the Ministry of Defense, USSR, and distributed down to the level of Army Commander.

2. In the interests of protecting our source, this material should be handled on a need-to-know basis within your office. Requests for extra copies of this report or for utilization of any part of this document in any other form should be addressed to the originating office.

FOR THE DEPUTY DIRECTOR, PLANS:

Richard Helms

RICHARD HELMS

Enclosure

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SECRET

Original: Director of Central Intelligence

cc: The Director, Defense Intelligence Agency

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Following is a verbatim translation of an article titled "Some Conclusions on the NATO Armed Forces' Exercise SIDE STEP", by Colonel-General S. Ivanov.

This article appeared in the 1960 Second Issue of a special version of the Soviet military journal Voyennaya Mysl (Military Thought). This journal is published irregularly and is classified TOP SECRET by the Soviets. It is distributed only within the Ministry of Defense down to the level of Army Commander.

[redacted] Comment: Some of the detail on the attached map is unclear; although the majority of the designations can be accepted with confidence, there is some room for error in the breakdown of the various army corps and similar small print. It is also difficult to distinguish between the lines of the successive positions. The transliterated letters "N/N" indicate military units without designations.

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Some Conclusions on the NATO

Armed Forces' Exercise

"SIDE STEP"

by

Colonel-General S. Ivanov

The leaders of the aggressive NATO Bloc plan to launch a future World war primarily by means of a surprise attack against the countries of the Socialist Camp. One cannot rule out their launching a world war after a period of sharp political tension or local wars. They envisage carrying out preparations for an aggressive war in such a way that they will be interpreted as purely "defensive" preparations, not only by the enemy but also by the personnel of the armed forces and by the populations of the member-countries of the bloc.

Decisive significance is attached to the initial period of the war, in the course of which it is intended to destroy the atomic potential of the enemy, to disorganize the national administration and economy, to disrupt the mobilization and deployment of the armed forces, to undermine the morale of the people, and in this way to achieve the immediate strategic goals of the war and to predetermine its outcome to their benefit. For the fulfillment of these tasks it is planned to bring to bear the greatest possible number of forces and means capable of using nuclear weapons.

The operational plans for the initial period of the war are periodically tested in operational-strategic exercises, during which different variations for launching and waging war given various degrees of preparedness of the armed forces are studied and tested.

From this point of view, the command-staff exercise, SIDE STEP, conducted in September 1959 with the participation of troops of the Allied Armed Forces of NATO merits special attention. In the importance of the problems which were being worked out, in its sweep and in the composition of the participants it was one of the largest exercises of recent years. It covered almost the entire area of Europe, of the Atlantic, and of the Mediterranean.

The commanders-in-chief and staffs of the armed forces of the North European, Central European, South European, Atlantic and Mediterranean theaters of military operations, the commanders and staffs of the branches (vid) of the armed forces and of the regions (rayon) in the theaters of military operations, the commanders and staffs of army groups, the tactical aviation commands of field and air armies, the commanding officers and staffs of army corps (altogether 19) and divisions (51), and also the commanding officers and staffs of atomic artillery, guided missile and free rocket units participated in the training exercise.

In addition, the central directorates of defense ministries, commands and staffs of military-territorial organs, rear elements (organ tyla), the central directorates of Ministries of Internal Affairs, of Transport, of the Merchant Fleet, of Economics, of Health, of Communications and a number of other agencies from all European member-countries of NATO participated in this exercise.

Exercise SIDE STEP consisted of four exercises which were conducted according to a common plan and against the background of a single strategic situation.

The most important were the exercises of the Allied Armed Forces of NATO of the Central European and of the Southeastern part of the South European Theaters of Military Operations in which problems of preparation and conduct of the first operations in the initial period of the war were worked on. The basic goals set were: perfection of the system for bringing the allied and national armed forces to combat readiness; testing the methods of using nuclear arms in the course of the initial operations; the organization of command; the coordination of forces and means and of the comprehensive support of military operations.

At the same time, a rear area exercise was conducted in all European theaters of military operations with the aim of testing the existing system of supply, as well as of studying the ability of member-countries of the bloc to support their armed forces with supplies independently. American troops stationed in Europe conducted a special rear area exercise, "RAPID SERVICE" ("Bystraya podacha"), in which questions of material-technical support of nuclear ground troops units were studied.

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On the basis of a common operational-strategic situation, a naval exercise was also conducted on defense of communications and on control of merchant shipping, in which the coordination between the Allied NATO staffs and the national staffs and establishments on questions of defense of naval communications and of insuring uninterrupted merchant navigation in the beginning of the war was worked on.

Exercise SIDE STEP was under the command of the Supreme Commanders-in-chief of the Allied Armed Forces of NATO in Europe and on the Atlantic. For direct command of the exercise, directing staffs were created at all staffs of formations and large units of the armed forces, as well as at the commands of military-territorial organs of various establishments participating in the exercise.

This exercise was conducted against a background of "military operations" in Europe and in the Atlantic area between the armed forces of NATO (BLUE) and the armed forces of the Warsaw Pact (ORANGE).

According to the given situation, the war between BLUE and ORANGE began as a result of gradual sharpening of international tension lasting for more than five months. The situation and the actions of the two sides were worked out so as to place all the blame for unleashing the war on the ORANGE , that is, on the Socialist countries, while the imperialist states, the NATO members, would be represented as victims of aggression, supposedly forced to carry out counter measures to the "aggressive" actions of ORANGE. If this rather artless camouflage is discarded, the predatory plans and actions of the bloc headed by the USA can be seen distinctly through the entire idea and course of the exercise.

How then was the development of events up to the outbreak of war envisaged?

The first period (January-March 1959) was characterized by "international equilibrium". This was followed by a period of "international distrust" (April-June), during the course of which relations between the leading countries of the political groupings deteriorated. The reason for this was supposedly a mutually prejudiced appraisal of the actions of the two sides, doubt of the sincerity of each other's policies and also the deadlock

which had been reached in the negotiations of the leading powers on control of the production of nuclear arms (just exactly on control, rather than on prohibition of nuclear arms).

The period of distrust was followed by increased international tension (July-August).

Since the international situation "continued to intensify", the NATO command announced a threatening situation on 1 September which continued for two weeks (until 14 September). During this period all bloc participants mapped out measures for partial mobilization, for bringing the armed forces to combat readiness, and for establishing the necessary order in the rear. After this, the system of alerts adopted by NATO was put into effect (14-19 September), and during this time the armed forces were brought to full combat readiness and were deployed in operational formations.

In this manner, events gradually developed up to the beginning of armed conflict. Evidently the NATO command reckons that under these conditions the aggressive bloc will succeed in completely preparing for war against the countries of the Socialist Camp, and at the same time in disorienting world opinion, with which, it is true, the imperialists do not now especially concern themselves. However, this by no means signifies that they plan only this method of preparation for unleashing war. If we analyze other exercises, especially the practical measures of NATO in preparation for future war, then it is not difficult to be convinced of the fact that they place first priority on a surprise attack against the countries of the Socialist Camp, secretly prepared in a very short time.

Further events developed in the following manner: ORANGE, having concentrated three fronts (75 divisions) in the Central European Theater of Military Operations, and also considerable forces (24 divisions) on the Balkan Peninsula and in the Caucasus, launched massed air and missile nuclear strikes at 0530 hours on 19 September against airfields, the means of nuclear attack (sredstvo yadernogy napadeniya), ports, large communication nets, and against BLUE troops; simultaneously, they took the offensive with groupings of ground troops. In the Central European theater, ORANGE directed the main attacks in the directions of: Magdeburg; Hanover; Muenster; Eisenach; Frankfurt am Main; Kaiserslautern. Auxiliary attacks were launched in a series of directions (diagram 1).

On the Balkan Peninsula, the main attack was directed against Istanbul and two attacks against Salonika from the territory of Bulgaria and Albania. From the Caucasus, the offensive was carried out in a series of directions deep into Turkish territory.

BLUE carries out a nuclear offensive [attack] using strategic, tactical, and carrier aviation, missiles and other ground troop weapons. The groupings of ground troops on all fronts conduct defensive actions and by 24 September fall back to a depth of from 50 to 150 km, where they stop the offensive of ORANGE. At the same time BLUE concentrate their reserves and prepare to go over to the counter attack. At 1500 hours on 25 September the exercise was concluded.

Let us briefly examine the grouping of ground troops set up at exercise SIDE STEP at the beginning of military operations.

In the Central European Theater were deployed the two army groups - the Northern and the Central - which existed there in peacetime. The Northern Army Group consisting of 10 divisions, one brigade group, and two regiments, strengthened by four atomic support battalions (division atomnoy poddershki), and a "Corporal" missile regiment was deployed in a 280 km strip (polosa) along the Weser and Fulda Rivers, 100-120 km to the west of the border between the FRG and the German Democratic Republic.

The Central Army Group consisting of the 7th American and the 1st French Armies (14 divisions, one tank group, four separate regiments (otdelnyy polk) and 24 atomic support battalions) deployed in a 475 km strip along a line located 30-50 km from the GDR border and in places up to 120 km.

The desire of the NATO command to cover the entire strategic front with divisions to an average operational density of 30 km per division attracts attention. In front of the defense line a cover zone (zona prikrytiya) is organized, where reconnaissance units operate and possibly, individual units from the first echelon divisions. Cover units are distributed along a considerable front. Their mission is to carry out holding actions in front of the basic defense line. They are incapable of offering serious resistance to the advance of our troops.

In the strategic reserve of the NATO command there were about 10-12 divisions from the complement of the first echelon of NATO (French and Belgian army corps, a Dutch division, West German units formed by mobilization, as well as large units transferred from North Africa, North America and England).

Approximately the same concept was applied to the operational formation of NATO forces on the Balkan Peninsula and in eastern Turkey.

Thus, in exercise SIDE STEP the NATO command organizes a typical linear defense along the entire strategic front, deploying the basic mass of its divisions in a single line. Such a defense condemned the ground troops to passivity, and consequently led to the instability of the entire defense, which was faced with strong offensive groupings of ORANGE ground troops superior to a significant degree to the NATO forces.

At first glance it may appear incomprehensibile that the NATO command forms a defense in the theaters of military operations, which can not withstand an offensive when nuclear arms are used. If one analyzes the entire course of the exercise, however, then it is not difficult to be convinced of the fact that the NATO command in the exercise relied basically not on the action of ground forces, but on the use of a large quantity of tactical and strategic nuclear weapons, on the conduct of a nuclear offensive. Under these conditions, the ground troops which had been brought to readiness by the beginning of military operations were entrusted with the task of covering the base locations of nuclear means (prikryt bazirovaniye yadernyye sredstva) and insuring the carrying out of a nuclear offensive and the deployment of the strategic reserves. By means of nuclear attacks, the NATO command evidently counted on inflicting such destruction on the enemy as to insure that its ground forces could go over to the offensive without engaging in----(4 or 5 words missing)----battles.

It is well known that ground troops are assigned an active role in the NATO plans of preparation for future war, especially in the Central European Theater. According to these plans, after a successful nuclear offensive, groupings of NATO ground troops must go over to a decisive offensive with the mission of destroying the troops of the Warsaw Pact countries, of occupying the territories of the GDR, Poland, Hungary, Czechoslovakia, and of carrying

military operations onto the territory of the USSR. The most responsible role in the offensive is entrusted to the armored and airborne troops, who must quickly and effectively exploit the results of the nuclear strikes by decisive actions.

If for any reasons the surprise nuclear attack of the Western Bloc does not achieve the expected results, defensive operations by the ground troops are envisaged, in order to win time for the concentration of reserves and the creation of conditions for going over to the counter-offensive. It is calculated that this goal may be achieved in a short period. Defensive operations are also based on the massed use of nuclear weapons, on broad maneuvering of forces and means, on the carrying out of counter-attacks and counter-blows by highly mobile units and large units, and on the wide use of all possible obstacles. Facts at our disposal indicate that the defensive grouping of ground troops set up in the exercise did not fully ensure the conduct of such a defensive operation.

Let us examine the course of combat operations in exercise SIDE STEP.

According to the plan, ORANGE started military operations by striking massed nuclear blows by missile troops and aviation with the simultaneous taking of the offensive by the ground troops. Actually the game was conducted differently. ORANGE launched the first massed nuclear strike at 0530 hours on 19 September (on the Balkan Peninsula at 0500 hours), but the commanders of the exercise gave the signal for the use of nuclear weapons by BLUES at 0340 hours on 19 September, that is, almost two hours before the "enemy" attack. It follows that the first nuclear blow at the exercise was struck by the NATO troops, which is what they are indeed preparing for. This was a pre-emptive (uprezhdayushchiy) and not a "counter" (otvetnyy) nuclear attack, as the NATO command was trying to show.

From the first minutes of the war the NATO troops conduct a nuclear offensive on a broad scale. The nuclear offensive planned by our probable enemies in the initial period of the war can be arbitrarily divided into two parts. The first and main part is the destruction of objectives in the Soviet Union throughout the entire depth of its territory by strategic nuclear means of attack. This part of the nuclear offensive was not played out in the exercise, but it was taken into account. The second part of the

nuclear offensive involves the destruction of objectives on the borders of the theaters of military operations and partly on the territory of the USSR and of the other Socialist countries up to a depth of 1,000 km from the front line by forces and means under the jurisdiction of theater commands.

The principal means of nuclear attack in the theaters of military operations are tactical aviation and cruise missiles (samolety-snaryady) of the "Matador" type, which are at disposal of the command in the theater. The missile weapons and atomic artillery of the ground troops which are under the direction of the commands of army groups, field armies, and army corps, and in the US Army - of divisions as well, are also used.

The following missions were entrusted to tactical aviation in the course of the nuclear offensive; the destruction of the means of nuclear attack (sredstvo yadernogo napadeniya); the neutralization of radiotechnical equipment; the disruption of communications; the destruction of reserves and of other enemy objectives; the support of their own troop operations.

The battle against the means of nuclear attack was considered by the NATO command as one of the most important tasks of the nuclear offensive. This was conducted by the destruction of airfields and missile launch sites, nuclear weapons, aviation and missiles, and of command centers. The final goal of this battle was set as the achievement of nuclear superiority over the enemy.

To disrupt communications, bridges and road junctions were destroyed, and barriers were created by atomic means. This was also intended to disrupt and interdict the transport of troops and supplies, to make difficult the maneuvering of troops, and to prevent the bringing up of strategic reserves.

Tactical aviation was used for the direct support of ground troops by striking blows against the combat formations of enemy troops, enemy reserves, command posts, depots, and also by conducting aerial reconnaissance. However, only a limited number of aircraft was made available for the direct support of ground troops.

The organization of the centralized control (upravleniye) of nuclear strikes in the South European Theater of Military Operations attracts attention. The resources of the 6th Fleet and the air

command were combined. For this, an operational center for joint operations was formed at the 6th Allied Tactical Air Command; in this center there were representatives of the Supreme Commander-in-Chief of NATO Armed Forces in Europe, of the commander-in-chief of the armed forces of the theater and of the commanders of the ground forces, the air force, and the navy. This center received requests from field and air armies for nuclear strikes, took decisions and issued the necessary instructions. Under this system, more than two hours elapsed from the moment intelligence information was received concerning identified targets for nuclear strikes to the time an order was issued for their destruction.

Operational-tactical missiles and atomic artillery were used to strike nuclear blows against objectives in operational-tactical depth and to support the combat operations of the ground troops. The majority of the missile and atomic artillery units was alloted to the army corps. A "Corporal" missile regiment was left under the command of the Commander of the Northern Army Group, while two "Redstone" missile groups (grupa) were under the command of the Commander of the 7th American Army.

Available information, though incomplete, concerning the use of nuclear weapons in exercise SIDE STEP attests to the significant increase in the number of nuclear strikes during the first days of the operation in comparison with previous exercises. Thus, the 4th Allied Tactical Air Command used 180 nuclear units (yedinits) during the first 38 hours of the war, the 7th American Army used about 205 nuclear rounds (boyevyye pripasy) in six days. In the South European Theater of Military Operations 313 nuclear rounds were used in the six days of war, 255 of which were used during the course of the first three days.

The experience gained in working on the problems of the use of nuclear weapons in exercise SIDE STEP confirms the existence of plans by the NATO command for the use of sudden massed (several - words missing) - with the aim of winning nuclear superiority, inflicting defeat on enemy troops, changing the strategic situation to their advantage, and insuring that their ground troops can go over to the offensive. The implementation of these plans in a future war can cause great damage to our armed forces in the theaters of military operations, unless timely effective methods to disrupt the nuclear offensive of the enemy are undertaken by our side at the very beginning of the war. In this connection,

it is worth noting several weak points in the so-called nuclear might of NATO. The basic means for using nuclear weapons in the theaters of military operations by the probable enemy remains tactical aviation, against which combat is not a complex problem at the present time. A large proportion of the nuclear weapons of the NATO ground troops consists of the cumbersome 280 mm cannons and 203.2 mm howitzers, the annihilation of which does not present any special difficulty either.

In the exercise, a great deal of attention was given to the defeat in combat operations of the ground troops (proigrysh boyevykh deystviy sukhoputnykh voysk). Although these questions have not been sufficiently clarified, the following conclusions may still be made on the basis of available information.

Holding actions in the cover zone went on for one day. By the end of the day on 19 September, ORANGE approached the basic line of defense having negotiated a distance of from 30 to 120 km. From 20 to 24 September NATO troops carried out defensive operations and were forced to retreat with continuing resistance in all directions. The general depth of the withdrawal was on the average 100-150 km, the average tempo of the withdrawal was 10-15 km a day in major directions (na glavnykh napravleniyakh), and 20-30 km a day in secondary directions. The withdrawal was accomplished evenly, almost along the entire front, under cover of massed nuclear strikes. In the course of the defensive engagement, no active operations of any kind were apparent on the part of the groupings of ground troops. By the end of 24 September the front had stabilized. It can be supposed that from this line (rubezh) it was planned to go over to the counter-offensive with the concentrated strategic reserves, who had not participated in the defensive engagements.

The indicated method of conducting the defensive operations of NATO troops in exercise SIDE STEP has its strong and its weak sides. The strong side of the defense is the massed use of nuclear weapons, while its weak side may be considered to be the shallow linear formation of the ground troops and their insufficient aggressiveness during the course of the engagement. In order to shatter such a defense, it is necessary to destroy the means of nuclear attack and to organize skillfully the operations of mobile groupings of troops in the most important directions with the aim of quick penetration to a great depth and the conduct of maneuvering operations. As far as the reserves who have concentrated in the

rear are concerned, they can also be uncovered and crushed by nuclear strikes. However, in the preparation of our armed forces it is necessary to assume that they will have to conduct offensive operations in the beginning of a future war under more complex conditions and against a more aggressive enemy.

Let us examine in more detail the more important questions which were worked out in exercise SIDE STEP.

First of all let us consider the measures taken by the member-countries of the aggressive NATO Bloc in preparing for and launching the war. The study of these measures was one of the important goals of the exercise. Incidentally, by these measures one may judge to a certain degree the actual plans of the probable enemy in regard to the unleashing of war against the countries of the Socialist Camp.

In the period of mounting international tension, that is approximately two and a half months prior to the beginning of the war, a series of concealed measures are taken in the NATO countries in preparation for war. With the introduction of a threatening situation preparation is intensified. The NATO Command looks upon the threatening period as a period of direct preparation for war. Under various pretexts (conduct of exercises, various call-ups and other "usual" measures), a concealed and comprehensive build-up of the Bloc's preparedness for unleashing an armed conflict takes place during this period. First of all, it was planned to intensify construction and repair work at all installations (obyekt) of major military significance, with a simultaneous discontinuation of work at secondary and non-military installations. Government control was established for the distribution and consumption of fuel and critical raw materials; the security of air-fields, storage depots, pipe lines, staffs, communications centers, and other important installations was strengthened; measures were carried out on a broad scale for antiaircraft defense and anti-atomic protection; the evacuation of the most important enterprises from border areas was planned.

Ten days prior to the beginning of military operations the transfer of French first-line large units and units from North Africa to France and onto the territory of the FRG begins. At the same time secret partial mobilization is carried out in a number of NATO member-countries and the building up to prescribed strength

of large units of the first echelon and the reserves; intelligence is activated as well.

In exercise SIDE STEP the introduction of a threatening situation did not signify change over to martial law. Martial law was introduced on 14 September, that is, five days before the war, when the Supreme Commander-in-Chief of the Allied Armed Forces of NATO received authority from the Permanent NATO Council (its highest political body) to put the alert systems into operation.

Two alert systems have been worked out in NATO: the military alert system, and the so-called official alert system. The first is brought into operation by the Supreme Commander-in-Chief of the Allied Armed Forces of the Bloc even without the sanction of the NATO Council in that instance when armed conflict may be suddenly unleashed within a one to 36-hour period. In this system measures of a purely military nature are carried out -- bringing to combat readiness mainly the Allied Armed Forces.

The second alert system is brought into operation by a resolution of the NATO Council in that instance when the military-political situation is aggravated relatively gradually. This system includes a simple, reinforced and a general alert, and signifies general political, military, and economic preparation by the Bloc for entry into war. It is important to note that the Supreme Commander-in-chief of the Allied Armed Forces of NATO is granted the right to independently declare a simple and reinforced alert in case of extraordinary circumstances.

In this manner, the military command of NATO, which is in the hands of the USA, has in essence unlimited authority to the extent of unleashing war, without considering the opinions of the other Bloc members. The alert declared by the Secretary of Defense of the USA, Gates, on the eve of the meetings of Chiefs of State in Paris, does not enter into the NATO alert system. This alert is considered to be an internal affair of the USA.

Exercise SIDE STEP was played out (3 or 4 words missing) alerts.

A Simple Alert was declared at 1700 hours on 14 September. On the basis of it the law on the state of emergency goes into effect in the member-countries of NATO. Secret mobilization

measures are carried out on a broad scale, military reserves are called up, the units and large units assigned to the disposal of the NATO Command are brought up to wartime strength, as are the cadre units of national subordination. Armed forces in areas of permanent disposition are brought to combat readiness, as are the troops of territorial and local antiaircraft defense, the system of shore defense, etc. Reserve units of various branches of the service are formed, and new units of national defense forces (vnutrennaya oborona) and various units of special designation are created. The border defense, and the antiaircraft, anti-atomic, anti-chemical, and anti-bacteriological defense of troops, of the population, and of military and non-military installations are strengthened. The wartime communications system is brought into operation, and preparations are made for anti-communications obstructions (zagrazhdeniye) and destruction. The movement of material, technical and medical supplies into the zone of combat operations is begun. At the same time many other measures are also carried out (the limiting of non-military deliveries, partial evacuation of the means of transport from border areas, preparation for the evacuation of the population from combat zones, establishment of control over refugees, intensification of counter-intelligence, etc.).

Two days before the beginning of military operations a Reinforced Alert is declared. In these two days formations and large units are deployed along lines and in positions in accordance with the operational plan, and aerial reconnaissance is significantly increased. The Border Guard is replaced by ground troops. At this same time, the delivery of nuclear weapons to airfields and to firing positions is organized, and all the reserves of material supplies of the troops are brought up to the established norms. Evacuation of supply depots, enterprises, raw material reserves, and the means of transport from border areas to the rear is organized on a broad scale, censorship is introduced, and the means of electronic warfare (sredstvo radio-voyny) are readied for activation. The carrying out of the above-mentioned measures upon the declaration of a Reinforced Alert two days before the beginning of military operations has been noted in a number of training exercises. This indicates that the NATO Command is striving to limit to the utmost the time needed for deployment of armed forces and operational formations and their arrival in attack positions prior to the beginning of military operations.

The order of the Supreme Commander-in-Chief to use nuclear arms was given 26 minutes later, i.e., at 0345 hours.

We have examined in detail the measures carried out by the NATO Command in exercise SIDE STEP in the way of preparations for unleashing war. Of course, these are far from all of the measures which will be carried out in an actual situation. For this reason, our intelligence organs are faced with a complex and responsible mission -- to keep all the preparations of the probable enemy for unleashing a new war under constant observation in order to give timely warning to our armed forces.

Of all the measures carried out by the NATO Command in the way of preparations for unleashing war, mobilization of the armed forces of member-countries of the aggressive bloc merits special attention. In exercise SIDE STEP, secret partial measures for building up the armed forces through mobilization started 20 days before the beginning of military operations.

Five days prior to the beginning of war the scale of secret mobilization in all the member-countries of the aggressive NATO Bloc broadened significantly. We do not have full information concerning the specific form taken by the development of mobilization in this exercise. However, if a number of training exercises and certain other measures of the NATO Command are analyzed, one may come to the following conclusions.

In accordance with existing agreements, 96 divisions and a number of separate brigade groups, units, and subunits were assigned to the Allied Armed Forces from the 109 divisions available in the NATO countries at the beginning of 1960. However, of these, only 50 divisions, and 23 brigade groups and separate units were subordinated to the Allied Command. The remaining large units and units remain under the subordination of national commands as part of the troops of the first and second echelons.

The large units subordinated to the Allied Command are maintained in peacetime at full TO & E strength and do not require additional build-up through mobilization. Almost all of them participated in the exercise and were deployed in operational formations two days prior to the beginning of war. The members of NATO provided the following number of divisions: USA-5, FRG-8, England-3, France-4, Turkey-15, Greece-8 divisions. A small

number of divisions were provided by Belgium (two divisions), Holland (two divisions), and Portugal (one).

The first echelon of NATO is comprised of 26 divisions and four brigades. In peacetime, they are maintained at 60 percent personnel strength and 100 percent equipment strength. Five days are alloted for their mobilization build-up. It must be assumed that these divisions could be mobilized and fully ready by the beginning of war, although information is lacking about their use in the exercise.

The remaining 20 divisions which comprise the second echelon of NATO, are kept at only 25-30 percent strength during peacetime. It would require 10-20 days to bring them to combat readiness.

What base do the NATO countries have for the build-up of ground troops through mobilization?

In the USA, in addition to the existing 15 regular divisions (of which 5 divisions are in Europe) there are 52 National Guard and Army Reserve divisions (about 1.5 million men), a significant part of which systematically undergoes combat training. The Inactive Reserve consists of about 500 thousand men. In this manner, the USA has at its disposal a trained reserve of up to 2 million men. In the USA much attention is being given to the problem of insuring rapid mobilization and the reinforcement of troops deployed in overseas theaters of military operations.

The FRG had 11 divisions at the beginning of 1960. When the Simple Alert was declared (14 September), assembly points for mobilization were set up in Western Germany and the call-up of reserves was started under the guise of refresher training. By 17 September it was planned to bring all large units and units of the Bundeswehr to a full wartime complement, to form a considerable number of new units, and to form personnel reserves. Specifically, reserve battalions were formed in each of the eight divisions under the subordination of the NATO Command. In military districts 57 reserve training battalions were formed, which were deployed in areas adjoining the western border of the FRG. The total number of enlisted and non-commissioned officer personnel in the organized reserve by 17 September was 78 thousand men, and about 500 reserve officers. In addition - (several words missing) - men who had passed the examination but who had not served in the Bundeswehr.

In Great Britain at the beginning of 1960 there were six divisions and 13 brigades and brigade groups. The base for the build-up of ground troops in wartime is the territorial army, consisting of 10 divisions which in peacetime are kept at 70-80 percent strength.

In other NATO member-countries contingents of military trained reserves are formed. Large units and units of reserves similar to the American and English ones do not exist in the majority of these countries at the present time.

It would not be correct to evaluate the potential build-up of NATO armed forces through mobilization in terms of divisions of ground troops. Under contemporary conditions the evaluation of the probable enemy's potential for the means of nuclear attack acquires decisive significance. Means of this type which are available to the NATO Command are: tactical aviation, cruise missiles "Matador" and "Mace", tactical missiles ("Redstone", "Corporal", "Honest John", "Lacrosse", "Little John"), and atomic artillery (280 mm cannon and 203.2 mm howitzers). As is known, the strategic means of nuclear attack have not been put at the disposal of the NATO Command, they are in the hands of the Anglo-American command and may be used in addition to the existing forces of NATO.

At the present time, plans are maturing for the creation of allied strategic nuclear forces within the Western European Alliance which includes Great Britain, France, FRG, Italy, Belgium, The Netherlands, and Luxemburg, that is, not all the members of NATO. Evidently, what is intended is to create air force and IRBM units capable of using nuclear weapons. These units are considered to be the basic means of war in Europe. For the present, no such allied strategic nuclear forces as yet exist in Europe. In exercise SIDE STEP, operational-tactical nuclear forces were used.

By 17 September all the tactical aviation forces available to the Allied NATO Command were brought to full combat readiness. In the Central European Theater of Military Operations the 2nd and 4th Allied Tactical Air Commands, composed of 115 squadrons (about 2500 aircraft, including about 1,500 fighters-bombers and more than 500 fighters of the Air Defense), were readied. In addition, the USA and England allocated about 1,000 fighter-bombers and fighters of the Air Defense. This number of aircraft basically conforms to the combat strength of NATO aviation in peacetime.

In the South European Theater of Military Operations the 6th Allied Tactical Air Command was brought to readiness. In addition, two tactical air squadrons were transferred to this theater from the USA and the carrier aviation of the 6th Fleet was used.

Significant forces of tactical aviation remain under the subordination of the national commands of the USA, England, and France. It was also planned to bring this aviation to combat readiness. In line with this the principal members of NATO are creating aviation reserves for replacing losses. The best are the Air Force reserves of the USA (the National Guard and the Air Force Reserve), which can also be brought to combat readiness.

Tactical missiles and atomic artillery are for the present under the command of the USA and, in part, England. At the present time, there are 48 battalions of guided missiles and free rockets of an operational-tactical designation and atomic artillery concentrated in the European theaters, of which 36 battalions are located in the Central European Theater of Military Operations. Evidently all of them took part in the exercise. In the last two days before the beginning of the war it was planned to deploy all these units in the appropriate areas and to equip them with nuclear weapons. The NATO Command considers that there is an insufficient quantity of these means of nuclear attack to support the combat operations of the allied ground troops. For this reason it is planned by 1963 to bring the number of battalions, together with the former ones, to 130 missile battalions of operational-tactical designation.

In this manner, exercise SIDE STEP and a number of other training exercises indicate that the NATO Command evidently plans to carry out in advance secret, comprehensive measures for the build-up of the armed forces through mobilization under conditions when war is preceded by a period of sharp political tension. At the same time it is known that in recent years in the West many of the military ideologists of imperialism are coming out against the build-up of the armed forces through mobilization before the beginning of war in view of the difficulty of hiding this undertaking, and consequently, the impossibility of achieving a surprise attack. For this reason it is proposed to have such armed forces in standing combat readiness in peacetime, as they would be able to start military operations without undertaking the slightest noticeable mobilization measures prior to the beginning of armed

conflict. It is fully possible that these views are reflected in the aggressive plans of the Command of the Anglo-American Bloc. We have many facts which indicate that this Command, utilizing numerous bases and the territories of the countries dependent on the USA and England, is striving to deploy in advance the necessary groupings of forces and means in the appropriate areas and in the theaters of military operations, from where they plan to start a war against the countries of the Socialist Camp.

Let us pause briefly on the problems which were worked on in the rear area exercises. These exercises took in all the European theaters of military operations. As already noted, in these exercises the existing system for supplying the armed forces of NATO with materiel was checked and the abilities of Bloc member-countries to independently support their troops assigned to NATO were studied.

The following principles were applied as the basis for organizing material-technical support in the exercise. Each member-country of NATO was responsible for the materiel, technical, and medical support of its troops and determined independently the types and quantities of the materiel necessary for the support of combat operations. The commanders of the Allied troops were charged with the responsibility for distribution and use of the material-technical supplies allocated to their jurisdiction, for making up requisitions (together with the corresponding national authorities) for material-technical supplies, and for the fulfillment of these requisitions by the national authorities and by the NATO high command. The commanders of the national formations were responsibile for the materiel, technical and medical support of the troops under their subordination.

Rear support of American and English ground troops was accomplished through zones of communication, which passed through the territories of France, FRG, Belgium, and Holland and were the connecting link between the USA, Great Britain and the zones of combat operations in the Central European Theater of Military Operations. In the aims of -- (part of one sentence missing) -- by rear units -- sectors, the base area (bazovyy uchastok) and the forward area (peredovoy uchastok) within the confines of which were located depots of various designations, rear units and establishments. The command for supplying atomic and missile weapons to the American ground troops was situated in the forward zone; it supplied these types of weapons to all atomic support units, including units assigned under the commands of other NATO

members countries.

Motor transport was chiefly used for delivery of supplies; fuel and lubricants were delivered by pipe lines and brought up in tank trucks and RR tankcars. Special attention in the exercise was devoted to questions of rapid delivery of supplies from ports located on the French coast to depots in the zone of combat operations.

As a whole, the system of organization of material-technical support of ground troops in the exercise was characterized by extreme complexity; this was caused by the fact that the governments and commands of each NATO member-country were responsible for supporting their troops with essential supplies, as well as by the differences in the organization of supply of the national formations and troops assigned to the jurisdiction of the NATO Command. One of the vulnerable points in this system is the great extension of the lines of communication. It is sufficient to point out that the depth of the zones of communications of the American and English troops, without counting the depth of the combat operation zones, was more than 700-750 km. This forces the command to subdivide into sectors, which in turn complicates the organization of delivery and supply.

There were certain unusual features in the operational calculations of the norms used in the exercise for material-technical supply of the West German ground troops, which consisted of the fact that to facilitate the formulation of estimates, all types of reserves of material-technical supplies were calculated on the basis of unit average norms of supply for one man, expressed in kilograms. Food, clothing, engineer equipment, construction materials, POL, communications equipment and other items were planned in weight units per man.

The method of calculating losses deserves attention. Losses of personnel and combat materiel were determined by taking into account the place of the large unit in the operational formation (mesta soyedineniya v operativnom postroyenii) and the degree of intensity of combat operations. For the first seven days of war these losses were estimated approximately as follows: personnel -14-21 percent; atomic artillery, guided missiles and free rockets, and combat vehicles -30-40 percent; tactical aviation combat aircraft - 71 percent; and air defense aircraft - 53 percent (taking into account repairs of damaged aircraft); atomic weapons - 30-35 percent; conventional ammunition -20-30 percent; POL - 20-35 percent.

Characteristically, losses of personnel, armament, and combat materiel during the first day of war were 3-5 times higher than the average daily losses for the seven days of the war.

The questions worked on in the naval exercise were basically those of defense of communications and control of merchant shipping during the first days of the war. The staffs of the allied naval and air forces on the Atlantic and in the zone of the English Channel, the staffs of the naval forces in the European theaters of military operations, and also merchant marine enterprises of the NATO member-countries took part in this training exercise.

In the design of the exercise it was planned that the main efforts of the NATO naval forces during the first days of the war be concentrated on the annihilation of nuclear missile weapons, airfields and submarine bases in the northwestern and southern areas of ORANGE territory, and on the defense of communications lines in the Atlantic and in the Mediterranean. Prior to the beginning of combat operations mobilization measures were carried out in the naval forces and in the merchant fleet, specific tasks of the allied naval forces in different areas were defined, the dispersion of the forces and weapons of the fleet was provided for, material-technical support and the evacuation of bases and ports were organized, a centralized directorate of shipping was created, convoys were formed and other measures were carried out.

It was considered that with the beginning of military operations a significant part of the NATO naval bases, ports and airfields in Western Europe and in North America was destroyed or was put out of commission for a prolonged period as a result of ORANGE nuclear strikes, and that a part of the reserves of different types of supplies on hand at the beginning of the war in depots of the European member-countries of NATO was wiped out. In this connection, the NATO Command planned to organize loading-unloading work in small harbors, in roadsteads and in unequipped sectors of the coast, although this brought about a decrease in shipping turnover (sudooborot) and a shortage of coasting vessels.

According to the plan of the exercise command, the principal threat to the shipping of NATO member-countries was created by ORANGE submarines, deployed along communications lines in the Atlantic and in the Mediterranean Sea, as well as by their

aviation, which along with carrying out attacks against ports and ships at sea, layed mines in coastal communications lines and in the English Channel, the Bay of Biscay and the Mediterranean Sea. In these circumstances, the defense of naval communications was organized on a zonal principle, in accordance with which responsibility for the security of merchant navigation within the boundaries of a theater or region rested on the corresponding NATO naval commander. The guarding and defense of individual vessels which had not yet been brought into a convoy were organized only in areas of most intensive navigation with the use of antisubmarine vessels and aircraft for this purpose, as well as of aircraft carrier antisubmarine hunter-killer groups. With defense of naval communications lines organized in this manner, the NATO Command calculates that the communications lines will not be seriously disrupted at the beginning of the war.

The exercise shows that the NATO Command is devoting great attention to insuring uninterrupted merchant navigation in a future war.

We have examined the most important features of the exercise of the allied armed forces of the aggressive NATO Bloc, SIDE STEP, and the basic problems which were worked on in this exercise. As can be seen, the exercise was a many-sided one, in which many practical problems of preparation and conduct of war in Europe were tested. To a certain degree, the exercise reflects the official views of the command of the Anglo-American Bloc on the nature and methods of waging a future aggressive war against the countries of the Socialist Camp.

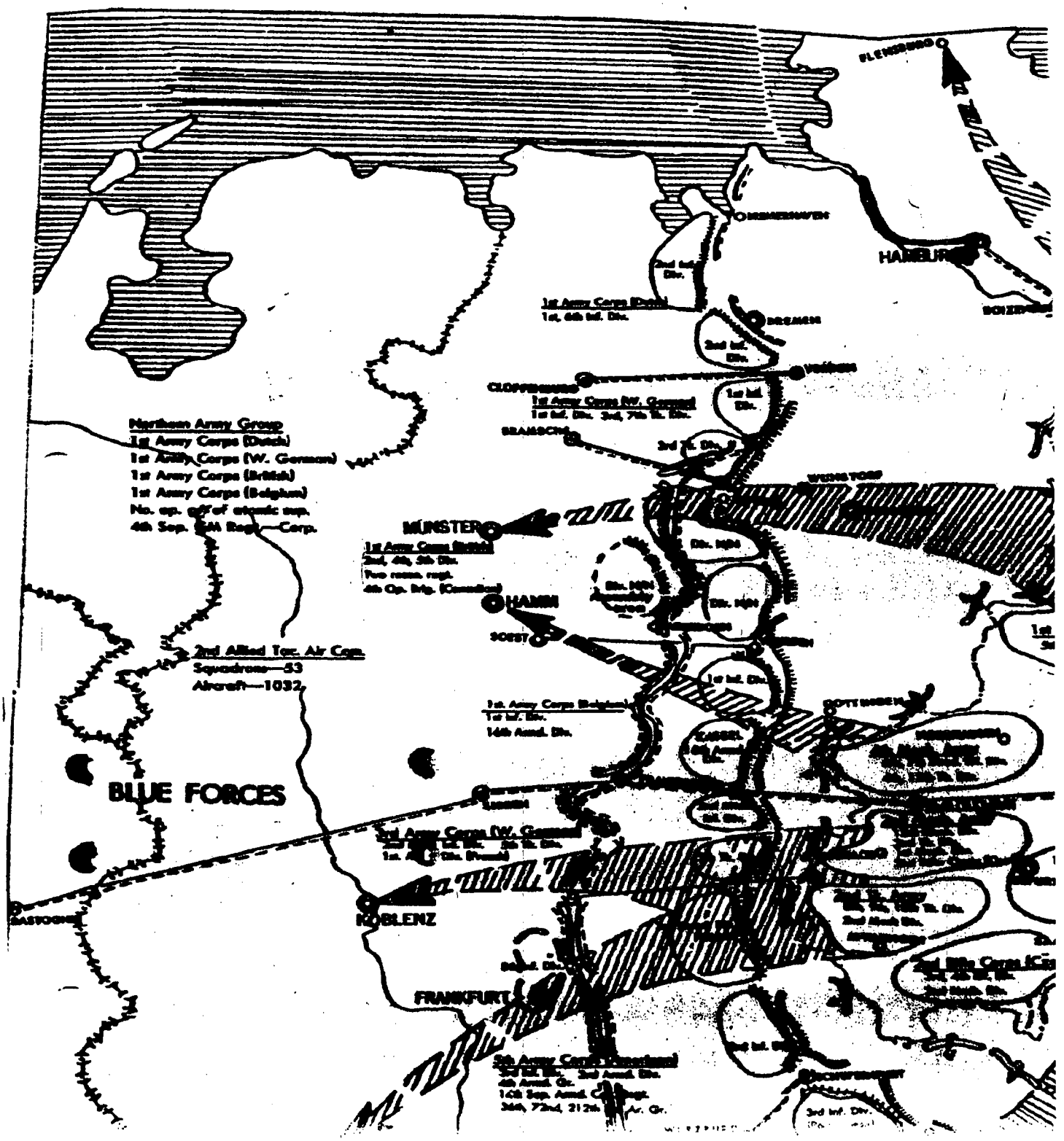
Special significance is attached to the advance implementation of mobilization measures to bringing the armed forces to combat readiness, to their deployment in operational formations, and to supplying them with all the essential means of support. The leaders of the Anglo-American Bloc are evidently not certain of the fact that the war unleashed by them will end as quickly as they wish. For this reason they are looking for methods of insuring the readiness of their armed forces even for a war which may be of long duration (last two words uncertain).

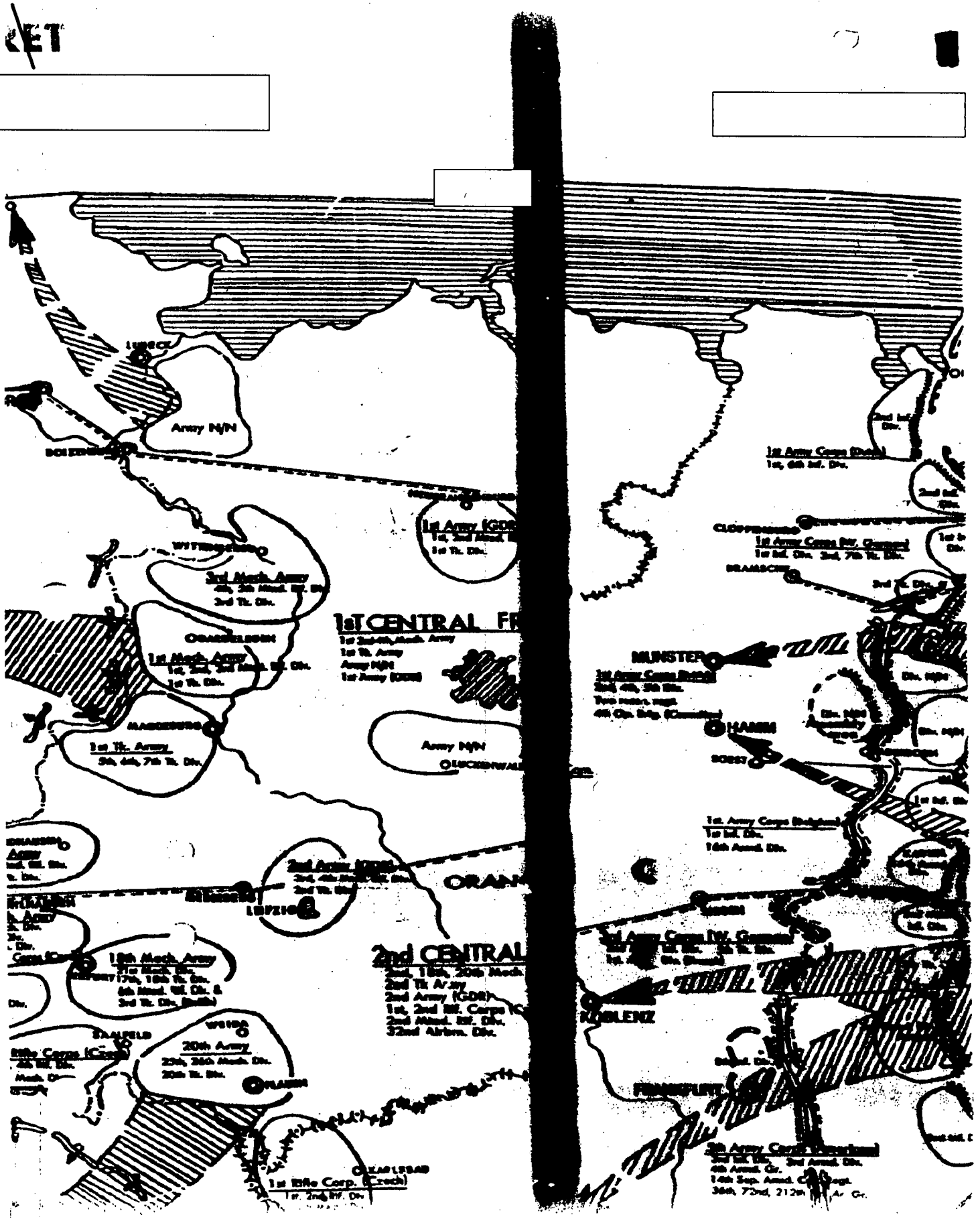
In the plans for waging the war the main reliance is placed on the use of nuclear weapons and on the carrying out of a nuclear offensive, with the aid of which it is calculated to drastically

change the correlation of forces in their favor and, it is hoped, to give the ground troops the possibility of conducting offensive operations. Among the means of using nuclear weapons side by side with aviation great importance is attached to missiles of operational-tactical designation. At the same time, atomic /barrel/ artillery is widely used as in the past. A large role is also assigned to the ground troops, who are given the mission of exploiting the results of a nuclear offensive for carrying military operations, as may be judged from certain available information, onto the territory of the Soviet Union.

On the whole, exercise SIDE STEP testifies to the aggressive nature of the NATO military preparations, which are openly directed against the Soviet Union and the other countries of the Socialist Camp. It is well to bear in mind, however, that the military preparations of NATO reflected in exercise SIDE STEP do not exhaust all the aggressive plans of the Anglo-American Bloc. As is known, in the future war which they are feverishly preparing against the USSR, the militaristic circles of this bloc place principal reliance on the strategic means of nuclear attack - strategic aviation, intercontinental missiles, missiles of intermediate range, and the aircraft carrier and missile carrier assault fleet. With the aid of these means of armed conflict they aim to solve the main problems of a future nuclear war.

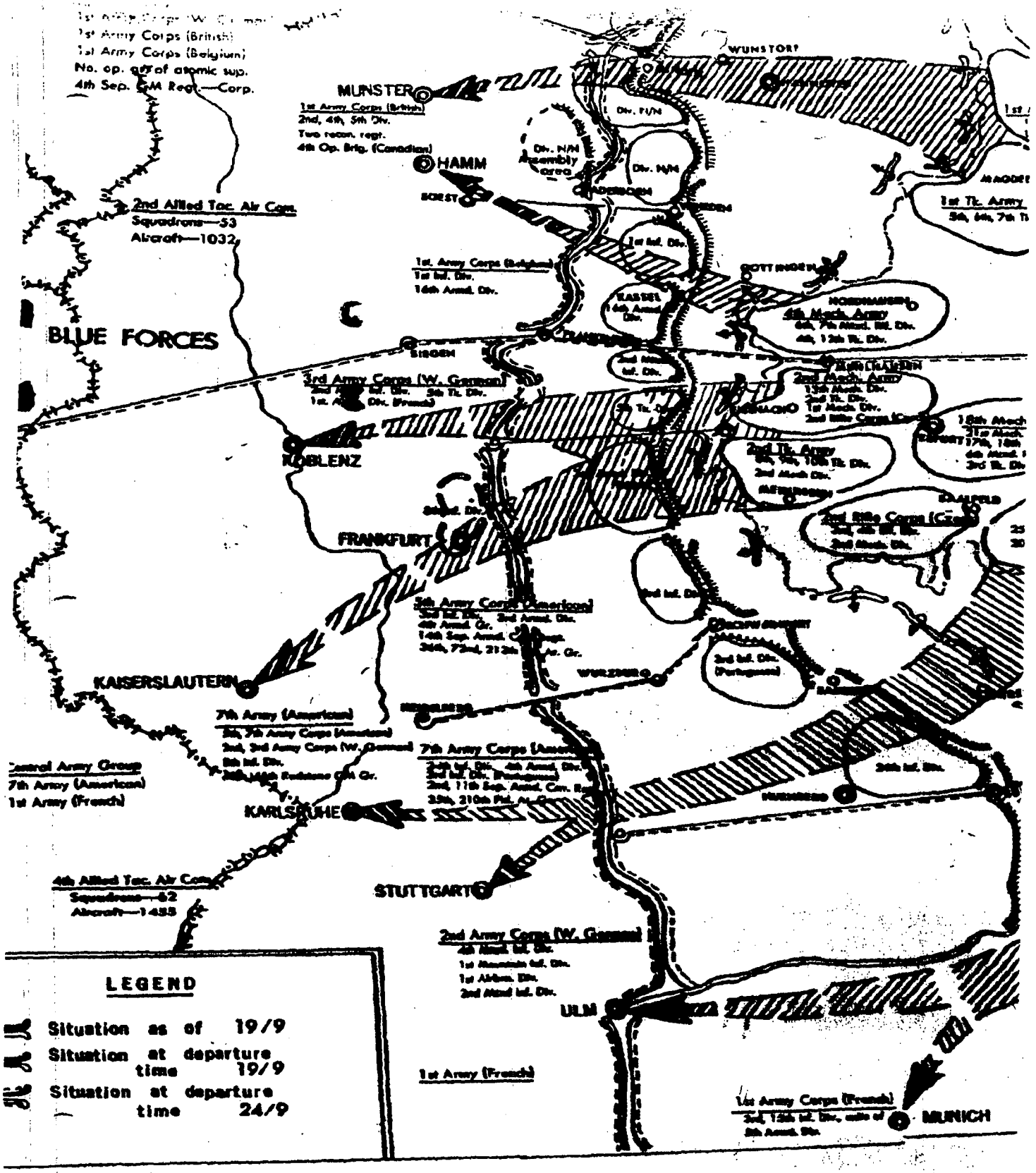
All this obligates our command personnel to study thoroughly the experience of the training exercises of the probable enemy, to analyze more deeply all the measures carried out by them on the preparation and unleashing of a new war against the Soviet Union and the other countries of the Socialist Camp, and to take this into account in the preparation of our armed forces and in the working out of methods of thwarting the aggressive adventures of the NATO leaders.


Northern Army Group
1st Army Corps (Dutch)
1st Army Corps (W. German)
1st Army Corps (British)
1st Army Corps (Belgium)
2nd Allied Tac. Air Com.
Squadrons—53
Aircraft—1032
BLUE FORCES
MÜNSTER
HAMM
KOBLENZ
FRANKFURT
HAMBURG
BREMEN
BRAMSCHE
KASSEL

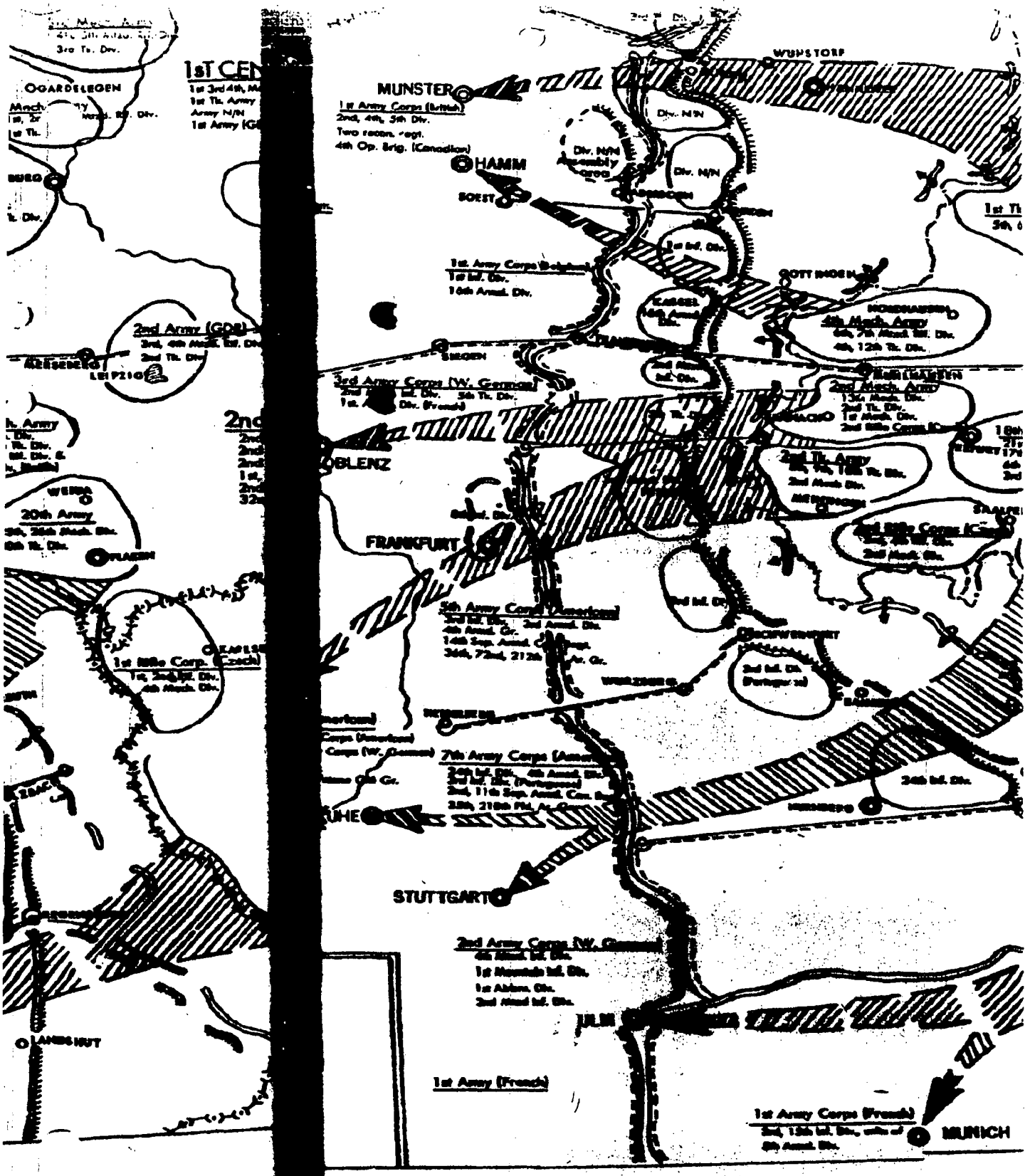

Army H/N
1st Army (GDR)
3rd Mech Army
1st CENTRAL FR
1st Army (GDR)
1st Mech Army
1st Tk. Army
5th, 4th, 7th Tk. Div.
Army H/N
2nd Army (GDR)
LEIPZIG
ORAN
18th Mech. Army
2nd CENTRAL
2nd Army (GDR)
20th Army
1st Rifle Corps (Czech)
1st Army Corps (Belg.)
MUNSTER
HAMM
1st Army Corps Belgium
3rd Army Corps NW. Germany
KOBLENZ
FRANKFURT
3rd Army Corps Rhine Area

SECRET

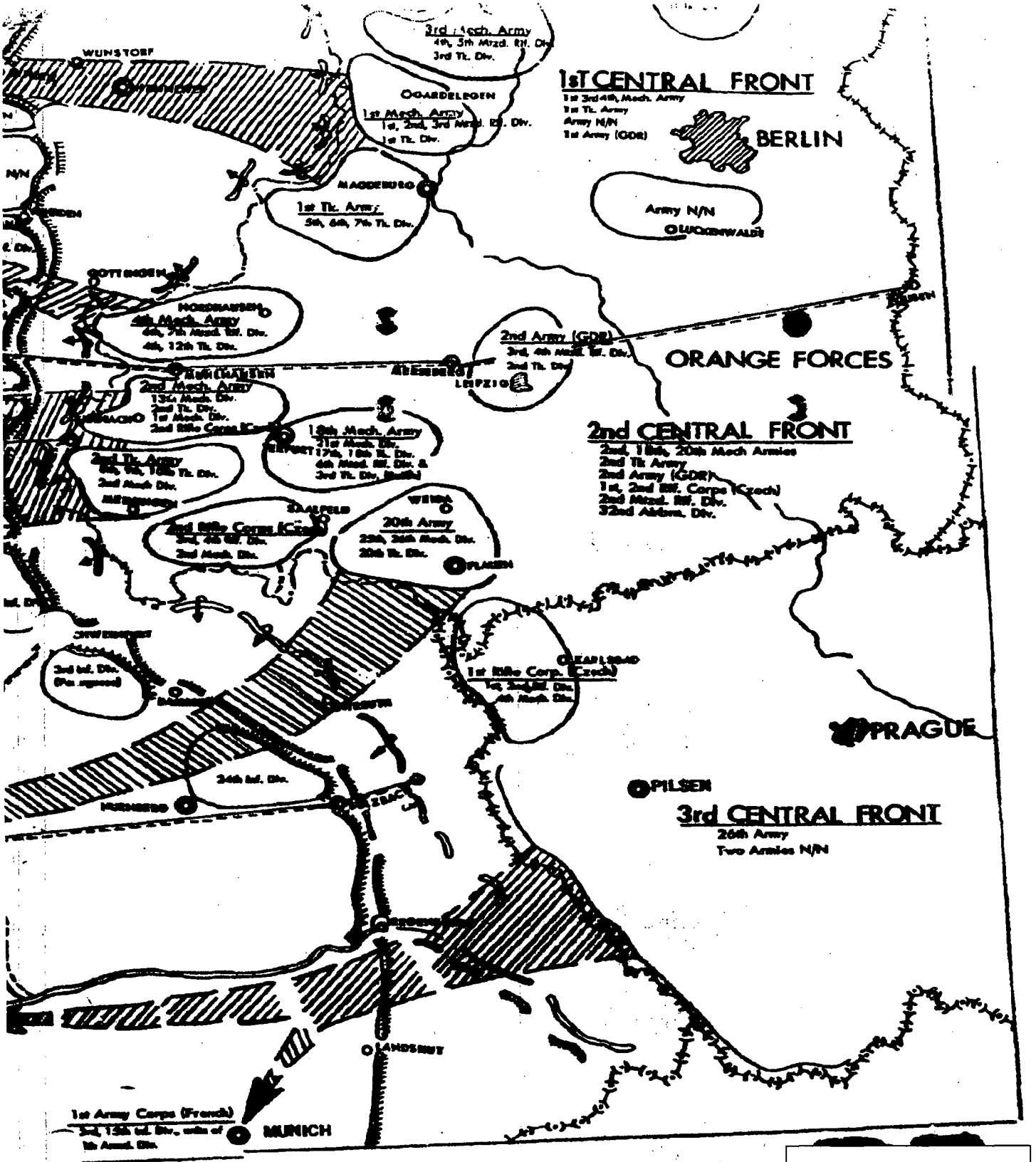

FLENSBURG
HAMBURG
LÜBECK
BREMEN
HANNOVER
Army N/N
1st Army (GDR)
1st Tk. Div.
3rd Mech. Army
3rd Tk. Div.
1st CENTRAL FRONT
BERLIN
1st Mech. Army
1st Tk. Army
Army N/N
4th Mech. Army
4th, 12th Tk. Div.
ORANGE FORCES
2nd Mech. Army
2nd Tk. Army
2nd Mech. Div.
11th Mech. Army
17th, 18th Tk. Div.
2nd CENTRAL FRONT
2nd Army (Czech)
1st, 2nd Rifle Corps (Czech)
20th Army
1st Rifle Corps (Czech)
3rd Inf. Div. (Portuguese)



PLAN and COURSE of COMBAT OPERATIONS in the CENTRAL EUROPEAN TI



PLAN and COURSE of COMBAT OPERATIONS in the CENTRAL EUROPEAN THEATER



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1962 05 24

MT Classical Military Art and Nuclear/Missile warfare

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CENTRAL INTELLIGENCE AGENCY
WASHINGTON 25, D C

2706

IRONBARK

MEMORANDUM FOR: The Director of Central Intelligence

SUBJECT : MILITARY THOUGHT: "Classical Military Art and Nuclear/Missile Warfare", by Major-General of Artillery I. Dzhordzhadze

1. Enclosed is a verbatim translation of an article which appeared in the TOP SECRET Special Collection of Articles of the Journal "Military Thought" ("Voyennaya Mysl") published by the Ministry of Defense, USSR, and distributed down to the level of Army Commander.

2. For convenience of reference by USIB agencies, the codeword IRONBARK has been assigned to this series of TOP SECRET CSDB reports containing documentary Soviet material. The word IRONBARK is classified CONFIDENTIAL and is to be used only among persons authorized to read and handle this material.

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Deputy Director (Plans)

Enclosure

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National Security Affairs

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Department of State

The Director, Defense Intelligence Agency

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COUNTRY : USSR

SUBJECT : MILITARY THOUGHT: "Classical Military Art and Nuclear/Missile Warfare", by Major-General of Artillery I. Dzhordzhadze

DATE OF INFO : October 1961

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Following is a verbatim translation of an article titled "Classical Military Art and Nuclear/Missile Warfare", written by Major-General of Artillery I. Dzhordzhadze.

This article appeared in the 1961 Fourth Issue of a special version of the Soviet military journal Voyennaya Mysl (Military Thought). This journal is published irregularly and is classified TOP SECRET by the Soviets. The 1961 Fourth Issue went to press on 20 October 1961. The Table of Contents for this issue was published as.

Classical Military Art and Nuclear/Missile Warfare*

by Major-General of Artillery I. Dzhordzhadze

The principles of military art which have been in existence for centuries and which have become classical and seemingly unchangeable must undergo basic changes under the conditions of conducting nuclear/missile warfare.

Moreover, among us there has arisen the idea that research directed at studying the nature of a future war and the special features of conducting operations will be done within the framework of the principles of military art which have already been formed and which prevail over military research and limit the extent and resolution of their scholarly and practical conclusions. In all works of theory which have been published, there is no lack of recognition of the significance of nuclear/missile equipment and of its main and decisive role. However, the whole meaning of the all-determining role of nuclear/missile weapons, a role which is recognized in theory, disappears when in practice these weapons are scattered among old arms of troops with the purpose of supporting infantry and tank operations.

That is why we consider it necessary to examine the problem of whether it is possible to put the new theory and practice of nuclear/missile warfare within the framework of classical military art or whether a new military art -- the art of nuclear/missile warfare -- must be created to replace the old one.

At first it should be ascertained whether the most effective use of new weapons can be made if they are in the complement of old arms of troops.

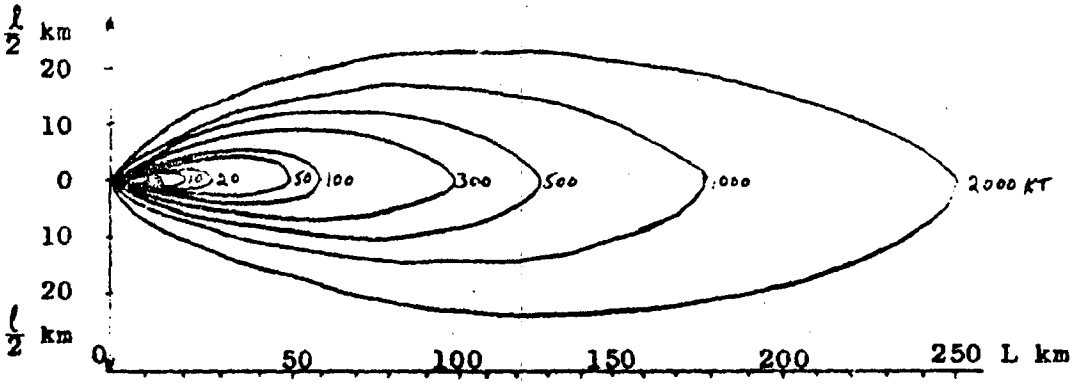
We are excluding this possibility. If motorized rifle and tank troops are given nuclear weapons, then

*The author has in mind that part of nuclear/missile war which is conducted within the framework of front operations, and he calls it field warfare.

still, because of the limited capabilities of the infantry and tanks, they will not be able to use the powerful combat features of the new weapons.

As can be seen from Figure 1, 3 two-megaton blasts in combination with 8 half-megaton blasts can destroy everything living and for a prolonged period exclude the possibility of troop combat operations over an area where a field army of the USA is located (23,000 km^2).

It is obvious that after conducting such a nuclear strike there is no need at all for operations over the contaminated territory by infantry and tanks. However, according to all existing canons of classical military art, the infantry and tanks should operate under these conditions, because it is they who are called upon to destroy the opposing enemy forces and carry out his final rout according to the principles for waging armed combat which have been developed.



Equivalent in TNT kilotons	Size and area of the path of the radioactive cloud			Troop elements of the army of the USA (area in km²)			
	L, Km	l, Km	S, Km²	Division 20 (10x20)	Corps 2400 (40x60)	Army 23,000 (180x130)	Group of armies 72,000 (360x200)
3	10	1.7	14	15	170	1653	5143
10	13	3.1	45	5	53	511	1600
20	26	4.3	88	3	28	260	818
50	40.8	6.8	222	1	11	104	325
100	57	9.6	438	1	6	53	166
300	98.5	16	1261	1	2	20	57
500	125.4	21	2107	1	1	10	35
1,000	177	30	4248	1	1	5	17
2,000	248	40	8134	1	1	3	8

Figure 1. The number of nuclear bursts needed for the radioactive contamination of ground with a radiation dose of 300 roentgens and a wind speed of 50 kph.

How can one combine in the same area large nuclear bursts which create high radiation levels with strikes by the infantry and tanks? There is only one solution -- to limit the force of nuclear weapon bursts to levels which would not prohibit operations by our own infantry-tank groupings and at the same time would ensure their advance.

Thus, the classical military art of waging infantry-tank warfare forces us to employ a whole arsenal of small nuclear weapons, starting at one kiloton, and limits the use of large bursts. In connection with this, there arises the need to create large supplies of small nuclear warheads, thousands of which would be needed for an operation, and actually issue 200 to 300 to a front. As a result there arises the completely distorted idea that there is always a shortage of nuclear warheads, whereas correct technical and operational calculations on the use of large bursts show that there is a quite sufficient amount of nuclear weapons at the front to accomplish all the tasks in a true nuclear/missile war.

From Figures 1 and 2 one can see that a field army of the USA can be destroyed by 3 two-megaton and 8 half-megaton bursts or 1,653 three-kiloton and 20 half-megaton or 5,143 three-kiloton bursts.

In this it should be stressed that nuclear bursts of high yield make it possible to destroy troops over an enormous area, and thus eliminate the need to seek out and destroy each individual target. Small nuclear bursts, however, are used to destroy specific targets, and this actually is a return to the practice of fire of tube artillery.

Small nuclear weapons do not ensure the complete destruction of the enemy as a whole, but accomplish only a part of this task and leave the achievement of the ultimate purpose to the infantry-tank grouping, whereas, by using nuclear weapons of large yield, one can completely accomplish the task of destroying the enemy in a very short time.

Consequently, there is no justification for striving, by artificial limitation of the technical capabilities of nuclear weapons, to create conditions for simultaneous operations in the same zone with them and with motorized rifle and tank units and large units.

It is inadmissible to have the large variety of small nuclear warheads now used in exercises, and their adaptation to the infantry and tanks simultaneously determines the large variety, also, of missile equipment. The correct technical and operational use of powerful nuclear bursts, however, limits the amount and variety of missile equipment and makes it possible to regulate its yields, having created a group of systems which is small in number.

The large amount and variety of nuclear/missile weapons and their adaptation to the old unwieldy system of controlling infantry-tank operations result in the need to create a large number of automated control systems which become completely unnecessary under the correct conduct of nuclear/missile warfare. Indeed, if the number of nuclear/missile weapons of great yield which are being used is not large, and if the functions of control of nuclear/missile weapons and infantry-tank groupings are clearly limited, then there will be very few installations for automating control of the new weapons, because one can control the old arms of troops without high-speed automated devices.

Thus, one can consider that to a large extent, within the framework of classical military art, the combat capabilities of the new equipment are paralyzed; the use of more effective and economic nuclear warheads of great yield is limited; unnecessary and expensive work is done to create an enormous arsenal of missile weapons which are adapted for the mass use of small nuclear warheads; and for all new and old arms of troops (despite the high speed demanded for this) there are being created numerous electronic machines, although there is no need to automate and complicate all the processes of controlling old arms of troops to an identical degree.

All this has a negative effect on carrying out a new military and technical program.

To give scope to the new military equipment and to determine the correct program for working it out and introducing it, one must decisively reject the use of obsolete canons of classical military art which obstruct

/text continues on page 10/

Previous (until 1953) (motorized infantry)	Existing (mixed motorized-infantry and nuclear/missile)	Proposed (nuclear/missile)

10 Army	6 Army	Secondary zones with fatal does of radiation
1 Army	4 Tank Army	
1 Motorized Army	15 Army	Continuous single larger zone of nuclear destruction
3 Army		
Airborne forces		
5 Army		
4 Army		
25 Army		

Figure 2. Fundamentals of Military Art

I and II

1. Each individual target is reconnoitered and destroyed.

2. Cooperation of all arms of troops consists of coordination of troop operations in one zone according to target, place, and time.

3. There is the massing of basic forces and weapons on one or two axes.

4. The system of controlling joint operations of individual arms of troops and weapons for combat is awkward; command posts are unwieldy, have little mobility, and are overloaded with support subunits.

5. There is the presence of millions of ground troops and an enormous amount of varied armaments and equipment within the complement of a front. There are enormous materiel expenditures and complexity in supporting operations.

Conclusions

1. There is no basic difference between former times and now in organizing and conducting troop combat operations and in the procedure and sequence of destroying targets. Despite the existence now of nuclear/missile weapons, everything remains at the level of prenuclear warfare (the only difference is that more powerful ammunition is used). The mechanical unification of the old and new military art has doubly complicated the conditions of conducting an operation, whereas nuclear/missile weapons objectively simplify these conditions.

2. The simultaneous operation of infantry-tank groupings and of nuclear/missile weapons in the same zone paralyzes the technical capabilities of nuclear weapons and gives rise to a shortage of small nuclear warheads.

3. The artificial subordination of nuclear/missile weapons to infantry-tank formations results in maintaining a large number of infantry-tank troops and old weapons of destruction and limits the development of new arms of troops.

[redacted]

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III

1. Groups of targets over a large area (in continuous zones) are reconnoitered and destroyed. Thanks to the use of large nuclear bursts, the possibility of a shortage of nuclear warheads will be eliminated.

2. Coordination consists of the most efficient distribution of the efforts of nuclear/missile and infantry-tank groupings according to zones.

3. A careful demarcation of tasks and the specialization of control of new and old arms of troops sharply reduces the organs of control. To control a nuclear/missile army there must be a single set of high-speed machines. Nuclear/missile strikes which are based on large bursts are simple in their planning and conduct.

4. Ground troops are sharply reduced. To combat a ground enemy one must have both a nuclear/missile and combined-arms army.

[redacted]

[redacted]

the efficient use of nuclear/missile weapons. Instead of this, one should work out new technical, operational-tactical, and organizational bases for waging nuclear/missile warfare.

First of all, the new equipment itself shows that not every war which envisages the use of nuclear and missile weapons can be called a nuclear/missile war. Thus, if one uses small nuclear bursts for fire support of infantry and tank operations, this will not be a nuclear/missile war but a somewhat modernized infantry-tank-artillery war.

The calculations cited in Figure 1 show that the most effective energy equivalent for a nuclear burst under field conditions is an equivalent within the .5 to 2 megaton range. In our opinion, this indicator should be acknowledged as the technical criterion of a genuine nuclear/missile war. All the other, smaller bursts must be considered of an auxiliary and incidental nature.

The needed yields of large nuclear bursts and their combination will be determined basically by the accepted plan of radiation contamination of large areas and by the conditions of the combat and meteorological situation.

In the event that 3 two-megaton and 8 half-megaton nuclear bursts are used against a field army of the USA, continuous radiation zones will be formed (Figure 2) with deadly radiation levels. This ensures the reliable destruction of enemy personnel and completely excludes the possibility of his maneuvering because the radiation zones will have the most fantastic shapes, forming an intricate maze.

The procedure for conducting nuclear/missile strikes envisages creating continuous zones of nuclear destruction of personnel over large areas with high radiation levels. The personnel of all arms of troops will not be able to operate on ground with such high radiation levels, and, consequently, even the conventional combat equipment will be useless. Under these conditions, there is no longer the need for additional physical destruction of enemy personnel by other means and arms of troops, just as there

also is no need for the destruction of the basic part of his combat equipment. Over the enormous areas of the continuous zones of nuclear destruction there is the need primarily to conduct operations of a checking and reconnaissance nature by the forces of bombardment and reconnaissance aircraft in combination with the operations of special groups of airborne forces. Special motorized detachments equipped with special vehicles, equipment, and protective devices can be used occasionally in this area.

The basic task of checking and reconnaissance operations must be to detect and destroy enemy nuclear/missile weapons operating with the aid of remote control and automatic systems without human assistance according to a prior given program.

The procedure and sequence of combating enemy missile troops will also change: at first, antiaircraft guided missiles will be destroyed and then surface-to-surface ones. This will open the possibility for the operations of all arms of air reconnaissance, whereas now antiaircraft guided missiles exclude the combat work of reconnaissance aviation, and this paralyzes all the reconnaissance activities of the front.

Thus, by creating continuous zones of nuclear destruction, the nuclear/missile troops are capable of independently performing the basic task of destroying the enemy over large areas. It is our profound conviction that the operations of large infantry-tank groupings in these zones are inadvisable and even impossible.

Consequently, the need arises to limit the zones of operations of the nuclear/missile and infantry-tank troops according to area instead of the existing principle of joint operations of new and old arms of troops.

Nuclear/missile troops plan and conduct a program of large bursts which create the desired picture of the radiation situation simultaneously over the whole area where the enemy troops are located. The picture of the

zones of complete enemy nuclear destruction will change depending on the given system of layers (sloynost) and the zones of radiation contamination, as well as the combat and meteorological situation. Variations of the plan for nuclear/missile strikes will comprise the basis of the program for conducting large bursts. These programs may be fed into existing computers in advance, and in an instant one can receive the best solution corresponding to the specific situation.

Thus, over the enormous areas where enemy troops are located, one can create a radiation situation in the tactical and operational depth in which enemy personnel would be in continuous radiation zones and would be broken up by zones with deadly radiation levels.

In our opinion, the art of determining and forming such continuous zones of nuclear destruction over enormous areas comprises the basis of military art in nuclear/missile warfare.

In the zones of continuous nuclear destruction, one can provide special corridors free from radiation contamination for the operations of our own infantry-tank and other troop groupings.

These troop groupings can be set aside for occupying enemy territory which is free from high radiation levels. They use and develop the success of the enemy's defeat which was achieved by large nuclear bursts. Therefore, we consider that the main task -- the destruction of opposing enemy forces -- can be accomplished independently by nuclear/missile troops, but the occupation of enemy territory, the consolidation of the success, and support for conducting nuclear/missile strikes can be done by combined-arms groupings equipped with ordinary weapons.

In our opinion, such an efficient distribution of efforts of new and old weapons according to ground, target, and tasks guarantees success in waging nuclear/missile warfare. With this, it must be kept in mind that under the conditions of nuclear/missile warfare one must inevitably

force from the battlefields the basic masses of infantry-tank and other troops equipped with conventional weapons and together with them their complex and unwieldy tactics and operational art and strategy, and one must confirm the new military art based on nuclear/missile methods for waging armed battle.

The purpose of any operation is to destroy the enemy. And we think that this destruction can and must be achieved, not by infantry-tank encirclement and splitting enemy troops, but by destroying them with nuclear weapons. The mighty combat powers of nuclear weapons simplify the strategy of destruction and, on the battlefield, remove the borders of tactical, operational, and strategic scales.

In delivering strategic nuclear/missile strikes, if one must select targets, then in the zone of combat operations of the fronts one must and can use their complete destruction by large nuclear bursts. We consider that we must put a decisive end to conducting front operations by old methods. Old arms of troops and methods of their combat use must be improved, and they must be adapted to the best use of the results of employing nuclear/missile weapons. But one cannot achieve decisive purposes in operations by expanding the capabilities of old arms of troops through equipping them with new weapons but by the unification of everything new (all types of weapons of mass destruction, missile and other means to deliver them, and reconnaissance means) into a single nuclear/missile army which is capable of destroying opposing enemy forces by crushing blows. Simultaneously with this, one must reduce sharply the troops equipped with conventional weapons, and unify motorized rifle, tank, and other conventional troops into homogeneous, combined-arms large units with a limited amount of armament. The basic tasks of these new combined-arms large units and formations will be to occupy enemy territory, consolidate the success achieved by the nuclear/missile strikes on areas free from high radiation levels, and to provide ground cover for a nuclear/missile army and for other troops on their own territory. Thus, the combined-arms large units will not be forced to wage battles and combat

with the main enemy forces as this was understood in the past. There will have to be an occasional use of transport aviation to move combined-arms large units by air to cross zones with high radiation levels.

Large nuclear bursts will reduce to a minimum the number and variety of nuclear and missile weapons. Basically there will have to be nuclear warheads of three types: half-megaton, one-megaton, and two-megaton, and correspondingly with them, three types of missiles with a firing range of up to 1000 km. It is technically more advisable to use fixed strategic missiles for a greater distance.

Thirty to forty launching mounts are able to create a continuous zone of nuclear destruction on the scale of a front. As can be seen, the number of launching mounts with ready missiles is not large. However, for their reliable use and support one must have a whole nuclear/missile army which should include: nuclear/missile divisions, a division for comprehensive reconnaissance -- to receive and clarify reconnaissance data -- checking and reconnaissance divisions conducting special operations over the zones of complete nuclear destruction, divisions of field cover for nuclear/missile troops, and technical and supply units and large units.

Thus, all the basic forces set aside to fight against a ground enemy can be united into two armies: a nuclear/missile army and a combined-arms army. The decisive and leading role of the commander of the nuclear/missile army is obvious, and therefore he will have to coordinate the operations of these armies. Apparently, there will be no need to create an unwieldy front directorate with general control functions. It is enough to supplement the command of the nuclear/missile army by a coordination group to establish agreement for operations on land and in the air.

It is natural that the methods and forms of military art which are based on the principles for waging nuclear/missile warfare under field conditions will exclude several generally accepted classical propositions, and the old

and new can be compared in Figure 2.

In our opinion, victory in field warfare will be achieved by that side which first goes over to genuine nuclear/missile warfare and takes advantage of the blunders of an enemy who adheres to the old principles of infantry-tank warfare. Thorough exploitation of enemy mistakes which stem from the old inherited principles of waging war, particularly in the initial period, will comprise a very important part of the new military art.

If we begin now to reorganize our armed forces in accordance with the principles of military art of genuine nuclear/missile warfare, then we shall gain several years and shall outstrip the most highly developed armies of the world in this regard.

* * *

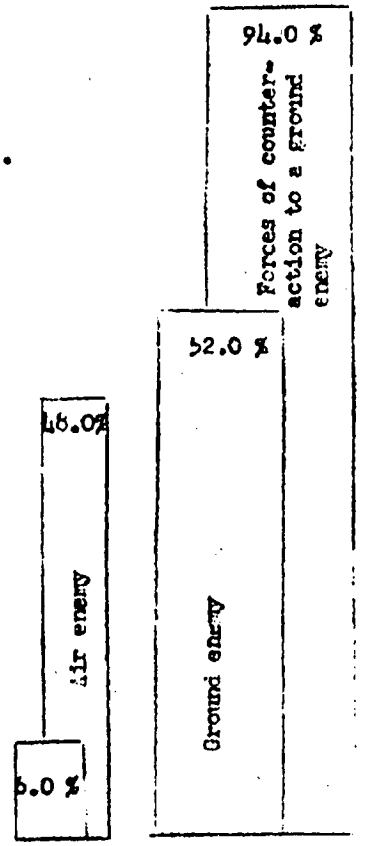
The problems of combating missile and aviation delivery means in the flight trajectory in the air and space are the element of nuclear/missile warfare which has been least resolved.

Investigation of the nature and operations of a probable air and ground enemy and a comparision of them with the capabilities of our ground troops reveals a sharp discrepancy between our forces of counteraction and the forces of enemy air invasion.

Table 1

Proportion of Air and Ground Attack of an Army of the USA and the Forces of Counteraction of the Ground Troops of the Soviet Army

		Means Used	Proportion of the strike and of the forces of counteraction to it, percentage: Field Army (Army)	Gr. of armies (front)	Avr. prop.
Proportion of the air attack of an army of the USA, percentage	Nuclear weapons	Cruise missiles Guided missile and free rocket aircraft	60	51	56
	Conventional weapons	Aircraft	46	35	40
	Average proportion of the strike		53	43	46
Proportion (percentage) of the forces of counteraction (antiaircraft troops of ground troops of the Soviet Army in relation to the whole complement of large units (formations) of ground troops			7.2	8.4	6*
Proportion of ground attack of an army of the USA, percentage	Nuclear weapons	Ballistic missiles; Cruise missiles Artillery	40	49	44
	Conventional weapons	Artillery	54	65	60
	Average proportion of the strike		47	57	52
Proportion of forces of counteraction of the Soviet Army			92.8	91.6	94



*This shows the average arithmetical calculation of the proportions of the complement of the means of the PVO (according to the number of weapons and launching mounts) motorised rifle divisions, tank divisions, heavy tank divisions, army, and front

These calculations (Table 1) show that the proportion of means of enemy air attack in the use of nuclear and conventional weapons comprises 48 percent and the means of ground attack 52 percent, while our forces of counteraction to an air enemy on the flight trajectory (PVO troops) comprise only 6 percent of ground troops, and to the ground enemy, 94 percent.

Thus, one can observe an obvious discrepancy between the complement of our ground troops and the nature of operations of the air and ground enemy. The operations of the probable enemy bear a typical air-ground character with an almost equal ratio of the yield of strikes from the air and on the ground. The counteraction of our ground troops, however, essentially has a one-sided, ground nature, with an obvious shortage of the forces of counteraction to the air enemy.

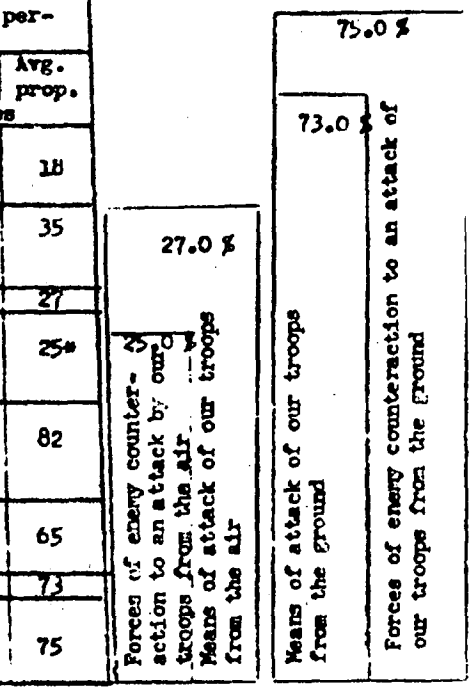
One observes a different picture in examining the forces of counteraction of our probable enemy (the army of the USA) (Table 2).

The proportion of our means of air attack of a front in using nuclear and conventional weapons comprises 27 percent and the means of ground attack, 73 percent.

Table 2

Proportion of Air and Ground Attack of Ground Troops of the Soviet Army and the Forces of Counteraction of the Army of the USA

		Means Used	Proportion of the strike and of the forces of counteraction to it, percentage		
			Army Field-army	Front (Group of armies	Avg. prop.
Proportion of the air attack on the ground troops of the Soviet Army, percentage	Nuclear weapons	Cruise missiles Aircraft	11	25	18
	Conventional weapons	Aircraft	30	40	35
	Average proportion		21	32	27
Proportion of forces of counteraction (PVO means of the ground troops) of the army of the USA			34.8	34.8	25*
Proportion of ground attack of the ground troops of the Soviet Army, percentage	Nuclear weapons	Ballistic missiles, cruise missiles	89	75	82
	Conventional weapons	Artillery and mortars	70	60	65
	Average proportion		79	67	73
Proportion of the forces of counteraction of the army of the USA			65.2	65.2	75



*This shows the average arithmetical calculation of the proportion of the complement of the means of the PVO (according to the number of weapons and launching mounts) of infantry divisions, armored divisions, /2 letters missing/, infantry corps, and of a group of armies

The forces of enemy counteraction to our means of air attack (antiaircraft guided missiles and antiaircraft artillery), however, comprise 25 percent of his ground troops, and to the means of ground attack, 75 percent.

Thus, the complement of enemy ground troops almost completely corresponds to the probable nature of our strikes against him. Taking into consideration the pronounced ground-air nature of the possible operations of our troops with a prevalence of ground strikes over air strikes by about 2.7 times, the counteraction of the enemy also has a pronounced ground-air nature with the predominance of the forces of counteraction to a ground attack over the forces of counteraction to an air attack.

Consequently, there is a sharp discrepancy between the complement of our ground troops and the nature of the possible attack from the air, something which is not observed among our probable enemy. This discrepancy which has arisen must be eliminated by a sharp increase in the PVO troops of the ground troops and in our means of air attack.

The air-ground nature of nuclear/missile warfare is a new, specific, and more complex side to the matter. The successful struggle in the air and the destruction of an air enemy is a decisive element in ensuring success in operations or campaigns.

PVO troops of a front who are equipped with modern nuclear antiaircraft systems act as the main force in the antimissile and antiaircraft struggle under field conditions. Antiaircraft defense of troops is now built and founded on the use of antiaircraft guided missiles. Therefore, all the old means of fighting against an air enemy can serve only as a supplement to the main PVO weapon - the antiaircraft guided missile - and in principle the new bases of the combat use of these missiles will determine the nature of the PVO troops as a whole.

Antiaircraft guided missiles make a start at creating a highly effective and constantly functioning zonal PVO system with which, instead of covering individual objectives (objective PVO), and periodic operations of fighter aviation, there is brought about simultaneously a constant cover of

all the numerous objectives, and the numerous linked zones of destruction of the antiaircraft guided missiles form a whole system for the struggle in the air in the zone of the whole front.

Antiaircraft guided missiles of various types are capable of accomplishing independently the tasks of fighting against all air targets, and this excludes the need to use other, old PVO means in the zone of their operations. This simplifies the conditions of coordination. By its operations, fighter aviation must supplement the PVO of the troops outside the destruction zones of the antiaircraft guided missiles.

Using electronic computers, we conducted research on the effectiveness of antiaircraft guided missile operations and of fighter aviation in a single zone and in various zones. It was discovered that in limiting the zones of operations, the effectiveness of antiaircraft guided missiles increased by more than two times.

Consequently, also under field conditions, it is becoming possible to employ the most convenient and simple principle of coordination of new and old PVO means by limiting their zones of operations according to the terrain. In connection with this, the existing belief that supposedly no single means of fighting against an air enemy can accomplish independently all the tasks of the PVO of the troops, and that there must be close coordination between completely different types of means within a single zone, is losing its force. To give independence to the new weapons in an operational-tactical and organizational manner -- this, in our opinion, is the main task of military science at the new stage of development of our armed forces.

The experience of exercises conducted with the use of electronic computers proved the great effectiveness of a constantly functioning system of zonal PVO. Together with this, there arose an urgent need for centralized control of the large forces of the antiaircraft guided missiles. The experience of exercises and the results of theoretical research confirm once more, not only logically but also mathematically, the advisability of unifying all antiaircraft guided missiles and other troops of the PVO which form a zonal system into single PVO large units and formations.

During recent years, however, there has been a process of reducing and splitting all troop large units of antiaircraft guided missiles and of forming separate subunits and units in place of them. Thus, there has been created a "scattering" of antiaircraft guided missile subunits of the troop PVO, and this excludes the possibility of creating a zonal PVO system. All this causes a sharp decrease in the organs and means of control of the PVO chiefs (nachalnik).

Right now the PVO of ground troops has been reduced to its minimum level for the whole history of its existence. What are the reasons for such a disastrous situation for the youngest and most progressive arm of troops?

In our opinion, the basic reason is that instead of a single, correct, integral theory for unifying and centralizing PVO troops, in practice there is being carried out a differential theory for their splitting and decentralization.

This has resulted in serious consequences -- the apparatus of the chiefs of the PVO troops of a front and of armies now must control masses of small subunits without having any resources for doing this. They were isolated from the troops and were transformed into secondary organs of combined-arms staffs, capable only of preparing the antiaircraft defense of the troops, but without being able to direct the PVO means to repel raids.

Such an imperfect organization of the PVO system for troops and of its control could not help but lead to an essentially incorrect use of the antiaircraft guided missiles -- the most reliable PVO means, which is called upon to put zonal cover into practice. Hundreds and thousands of missiles will be spent for nothing because, lacking an organizing principle and centralized system of automated control, some of the targets will be fired at by an unjustifiably large number of missiles and the next will fly with impunity over the battle formations of the troops.

By attaching the antiaircraft guided missile subunits directly to the cover objectives -- which actually also means including them in the makeup of divisions -- they are artificially transformed into a means of direct cover.

As a system, zonal cover is excluded, and this weakens the PVO as a whole.

The creation of an automated system of centralized control of PVO troops is one of the most important problems of the present time. Its resolution is made much more difficult if there is "scattering" of the antiaircraft guided missile units. The movement, building up of the zone of cover, the replacement of units which have been put out of action, and distribution of targets are either all excluded or will be unsystematic and inefficient.

Despite scientific and actually proven principles, it is proposed that the antiaircraft guided missile models which have not yet appeared also be split among subunits, instead of using them in a centralized way on the scale of PVO large units and formations.

We consider that the need to create a system of zonal PVO inevitably confirms the need which arose long ago to create a PVO army as a powerful means for antimissile and antiaircraft combat under field conditions.

Under modern conditions, with the enormous satiation of PVO troops of fronts with antiaircraft missile means, it would be completely correct to examine the PVO of troops as the most massive missile arm of troops and as the first PVO echelon of the State as a whole, and to devote particular attention to its development.

We must create a special industry of troop antiaircraft guided missiles, of automated groups, and a system of control; a special institute for antiaircraft guided missiles and automation; we must accelerate the introduction of troop antimissile systems; and we must create computing centers, an academy, and ranges for the accelerated introduction of mathematical methods and machines for controlling PVO troops under field conditions.

Nuclear energy as a means of destruction, missiles as means of delivery, and electronics as a means of control, are the basic components of a technical base on which modern armed forces, including the PVO troops (for antimissile and antiaircraft combat), must rest.

* *

The change from an army intended to wage infantry-tank warfare to an army intended to wage nuclear/missile warfare must be understood not as a document but as a very serious process arising from several military reforms.

During the history of the existence of organized armies, never has one felt so sharply the need to make new military reforms as now. Despite the fact that nuclear/missile weapons caused the need to change from infantry-tank warfare to new, nuclear/missile warfare, and thus determined the basic changes in building the armed forces, in our opinion this far-reaching revolution was not marked or consolidated by appropriate military reforms. It is not out of place to recall that with the small numerical strength of the Red Army and its weak armaments, during the period of 1924 to 1928 military reforms were made under the direction of the military commission of the Central Committee of the Russian Communist Party (Bolsheviks). The course of military reforms and the five-year plan for building the armed forces were discussed at two plenums of the Central Committee of the Russian Communist Party (Bolsheviks), at the 13th, 14th, and 15th Party Congresses, and at the 3rd and 4th All-Union Congresses of Soviets.

It is quite obvious that at the same high level one should make new and more complex and important military reforms to ensure the decisive reorganization of the armed forces and their readiness to wage nuclear/missile warfare.

We are convinced that military reforms can never be replaced by individual orders, ukases, or measures which make it possible to resolve problems which may be very important but which are still particular problems, expecially if this concerns the creation of new arms of troops. The formation of new types of armed forces and arms of troops must occur on the basis of a law and must be accompanied by a corresponding change in the role and place of old arms of troops, and this is possible only by making thoroughly based and, consequently, firm military reforms.

Military reforms must legalize the formation of new nuclear and missile arms of troops and must simultaneously determine the tasks and role of the old arms of troops.

To wage field warfare one must create two new missile arms of troops (nuclear/missile troops and troops for antimissile and antiaircraft combat) and one arm of troops equipped with conventional weapons.

The tasks of the strategic armed forces and the tasks for waging field warfare must also be carefully defined by military reforms. The strategic armed forces are called upon to destroy and neutralize the enemy's military and economic potential and to protect our country.

As is well known, nuclear/missile troops and troops for antimissile and antiaircraft combat (The PVO Troops of the Country) will be organized on a strategic scale. Such a successful combination of new principles of attack and defense on a strategic scale, obviously, can and must be spread to the conduct of field warfare.

In our opinion, military districts, which long ago adapted themselves to waging infantry-tank warfare, also must reorganize themselves in accordance with the new conditions of nuclear/missile warfare. It is obvious that the internal districts must prepare themselves for strategic nuclear/missile strikes and for antiair defense, and the border districts must prepare themselves to wage field warfare with the aim of destroying the armed forces on the fronts.

The combination of strategic nuclear/missile strikes and antimissile operations conducted by internal districts with the nuclear/missile strikes and antimissile operations conducted by border districts will be one of the basic tasks of military strategy.

The complete independence of each district makes for their interchangeability and guarantees the reliability of fulfilment of any strategic and operational task, even when considerable forces are put out of action.

To ensure the complete independence and reliability of operations of each district, during the initial period of a war one must reject the existing methods of rear area support based on supplying the troops with all weapons, including missile weapons, before and during the battle

and must change to the principle of early supply of troops with all types of nuclear and missile weapons. Early nuclear missile supply and engineer preparation of troops in the Theater of Military Operations create genuine conditions for the successful and timely conduct of operations during the initial period of the war.

For the practical instituting of military reforms and transformations in the army one must decisively activate military science. All the problems touching the various areas of reality and practice are resolved now only on a scientific basis. In our opinion, military science is illuminating in a completely unsatisfactory way the path for the practice of military affairs, and to a considerable degree it is still concerned with the scientific basis of problems which have already been resolved. It appears to us that military science concerns itself more with studying the most general laws. It is no accident that a definition of military science is still prevalent according to which Soviet military science is the sole system of knowledge about the preparation and conduct of an armed struggle to defend the Soviet Union from imperialist aggression. To the highest degree this is a general definition. Military science must be the most specific area of knowledge, despite the fact that it relies on the highest and most complex achievements of technology and the intellect.

In our opinion, military science is the science for creating and constantly improving the technical program of armaments, a program which is combined with the most advantageous methods for employing the armed forces and the forms of their organization. The military science of our time fluctuates between the ancient past and the still unknown future. The matter is further complicated because the past stubbornly refuses to relinquish its positions. Under these conditions all our knowledge and experience must be united to work out a new and more intelligent doctrine of field warfare.

If one must put at the basis of this doctrine some expressed views, then it is our deep conviction that they should be the following:

— to save hundreds of billions of rubles by bringing about the best long-range military-technical program based on the recognition of the role of large nuclear bursts and

by ceasing the production of unneeded and already quite worthless small nuclear, missile, electronic, and numerous conventional armaments;

— to reduce the armed forces sharply and to receive enormous economic benefits, and at the same time to make them incomparably stronger and more effective in combat;

— to simplify the art of waging armed struggle, to reduce the organs of control sharply, and thus to make it easy to control troops under the most complex field conditions.

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TOP SECRET

CENTRAL INTELLIGENCE AGENCY
WASHINGTON 25, D. C.

24 MAY 1962

IRONBARK

MEMORANDUM FOR: Director of Central Intelligence

SUBJECT : Preliminary Comments on Article from the Soviet Publication Military Thought

1. This article contains the most radical proposals yet advanced in the Military Thought series for reforming Soviet doctrine for the tactical use of nuclear weapons. The author, Major General of Artillery I. Dzhordzhadze, argues that it is necessary to create what he calls a new military art -- the art of nuclear/missile warfare -- to replace the art of tank and infantry war. Other proposals, he maintains, merely graft new weapons on to obsolete concepts and restrict the potential of the new weapons.

2. The heart of Dzhordzhadze's argument is the proposition that victory in theater operations can best be achieved by employing small numbers of high yield weapons against enemy ground forces. He asserts that 3 two-megaton blasts, together with 8 half-megaton blasts, can destroy everything living and exclude for a prolonged period the possibility of troop operations in the entire area normally occupied by a US field army in combat formation. Dzhordzhadze maintains that

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present Soviet operational concepts for combat against a US army, which evidently call for the expenditure of hundreds of smaller nuclear weapons, are too wasteful and would be only partially effective.

3. The author advocates the creation of a nuclear/missile army as the main sub-group of a Soviet Front, with nuclear/missile divisions as the army's main sub-group. In a Front there would also be a combined arms army, but it would be subordinate to the nuclear/missile army and its role would be merely to provide protection for the nuclear/missile units and to occupy enemy territory. He recommends the creation of a sceal air defense system for centralized control of antiaircraft and antimissile troops deployed in the defense of ground forces.

4. Dzhordzhadze argues that if the USSR would begin at once to reorganize its armed forces in accordance with his principles, it would gain several years and "outstrip the most highly developed armies of the world". He also claims that the adoption of his view would: a) save "hundreds of billions" of rubles through the cessation of production of needless small nuclear weapons, missiles, electronic equipment, and conventional arms; b) sharply reduce the size of the armed forces and at the same time strengthen them; and c) make it easier to control troops under the most complex field conditions.

[redacted]

FONDARK

5. The evidence available to us contains no sign that these proposals have gained acceptance. In some respects they are reminiscent of Khrushchev's January 1960 speech on military reorganization and reductions, in which the Soviet leader justified his proposed troop cuts largely on the grounds that increased firepower made mass armies unnecessary. However, the general trend of recent articles on strategy in the Military Thought series has been away from the more extreme views put forward by some authors immediately after Khrushchev's speech. In public statements in the fall of 1961 and in 1962, Soviet military leaders have adopted a middle position, advocating a buildup in nuclear missile power as well as the retention of large ground forces, and the reduction of military manpower has been suspended. Nevertheless, the present article shows that in October 1961 the door had not been closed to the vigorous advocacy of controversial proposals in the privacy of a TOP SECRET military journal.

[redacted]

RAY S. CLINE
Deputy Director (Intelligence)

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