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CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

27 July 1978

MEMORANDUM FOR: The Director of Central Intelligence

FROM : John N. McMahon
Deputy Director for Operations

SUBJECT : MILITARY THOUGHT (USSR): Rear Services Support of an Offensive Operation in a Mountainous Theater of Military Operations

1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". This article examines possible solutions to certain problems of providing materiel support of troops peculiar to mountainous theaters which are characterized by limited maneuvering capacity. For ground and water shipments the author discusses the need to have road troops prepare and maintain lines of transportation and restore ports and mooring facilities, respectively. Regarding the organization of supply of front troops with missile propellant, conventional fuel, and ammunition, the author proposes stockpiling reserves in peacetime, discusses the procedure for locating and relocating the branches of front missile propellant depots once military operations have begun, and cites positive exercise experience regarding the reliability and large capacity of pipeline transport to supply troops with fuel. This article appeared in Issue No. 2 (78) for 1966. [redacted]

2. Because the source of this report is extremely sensitive, this document should be handled on a strict need-to-know basis within recipient agencies. For ease of reference, reports from this publication have been assigned [redacted]

John N. McMahon

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MILITARY THOUGHT (USSR): Rear Services Support of an Offensive Operation in a Mountainous Theater of Military Operations

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Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 2 (78) for 1966 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". The author of this article is General-Leytenant N. Levchenko. This article examines possible solutions to certain problems of providing materiel support of troops peculiar to mountainous theaters which are characterized by limited maneuvering capacity. For ground and water shipments the author discusses the need to have road troops prepare and maintain lines of transportation and restore ports and mooring facilities, respectively. Regarding the organization of supply of front troops with missile propellant, conventional fuel, and ammunition, the author proposes stockpiling reserves in peacetime, discusses the procedure for locating and relocating the branches of front missile propellant depots once military operations have begun, and cites positive exercise experience regarding the reliability and large capacity of pipeline transport to supply troops with fuel. End of Summary

[redacted] Comment:
General-Leytenant Nikolay Ivanovich Levchenko is a Deputy Chief of Rear Services of the Soviet Armed Forces. [redacted]

[redacted]

[redacted]

Rear Services Support of an Offensive Operation in a Mountainous Theater of Military Operations

by

General-Leytenant N. LEVCHENKO

In recent years, a number of operational staff exercises and special exercises have been carried out in the Transcaucasus Military District, making it possible to draw certain conclusions in the area of organizing rear services support of troops in a mountainous theater of military operations when combat actions develop suddenly and when there is no period of threat during which it would be possible to take any kind of preparatory measures.

In such a situation developing in the first days of a war, the rear services support of the front troops will be based entirely on the forces and means of the military district. This predetermines the need to make rear services preparations within the territory of the military district in advance and to set up, in good time, the prescribed grouping of rear services units and facilities and reserves of materiel-technical means.

In a mountainous theater of military operations, in view of its characteristics, it is necessary on each separate operational axis to have military district depots of the main types of supplies (ammunition, fuel, missile propellant, and food) and depot branches for the other types of supplies. The military district depots must be deployed in at least two echelons, with the first at a distance of up to 60 to 70 kilometers from the state border and the second up to 200 kilometers from it. In this way, favorable conditions are created for rear services support of the first-echelon front troops and for deployment of the supply organs of the front and the armies.

If the location of the military district depots already existing in peacetime does not satisfy these requirements, the resulting negative effects can be compensated for to some extent during the operation by extensive use of offloading points set up near the areas of combat actions and the concentration (forming-up) areas of large units and units and also by deploying

branches of military district depots.

The experience of the initial period of the Great Patriotic War showed conclusively that it is absolutely necessary for the composition of the military district to include the required number of rear services units and facilities and for them to be at the same level of combat readiness as the troops and capable of providing rear services support to the troops. This involves mainly the motor transport, road repair and traffic control, medical, and repair and recovery units and facilities.

In our opinion, approximately the following complement of rear services units and facilities must be kept in readiness in the composition of the military district rear services (in addition to existing depots with reserves of materiel and other permanent facilities):

-- for the military district: a regular motor transport brigade with two deployed motor transport battalions, one pipeline battalion, a regular road brigade with two deployed road traffic control battalions, two or three separate medical detachments, one battalion each for repair of armored and motor vehicle-tractor equipment, one battalion for recovery of armored equipment and one company for recovery of motor vehicle-tractor equipment, and a regular rear services communications battalion with one deployed company;

-- in the composition of the combined-arms army: one motor transport battalion, one road traffic control battalion at reduced strength, one or two separate medical detachments, and a rear services communications company at reduced strength;

-- in the composition of the air army: one motor transport battalion, two airfield engineer battalions, and a rear services communications company at reduced strength.

Having these rear services units and facilities, it is possible to speak of ensuring the materiel and medical support of troops during the first few days of an operation which has begun and also of continuity in rear services support between the rear services of the military district and those of the front and armies. As more rear services units and facilities come into the front (army), the operational structure of the rear services will take on an ever more complete form in accordance with the commander's decision for the operation.

One of the main elements in organizing rear services support of an operation is the correct selection of areas for locating front and army bases and the determination of the procedure for relocating them during military operations. In this connection we would like to focus attention on several points.

The nature of a mountainous theater of military operations compels us not so much to echelon front bases throughout the depth as to distribute them along the axes. This blurs the distinction between the forward and rear bases of the front, not only as to their location relative to the front line but also as to the nature of the tasks they are to fulfil. Thus, rear bases, stockpiling and allocating reserves coming in from the Center, may simultaneously carry out the functions of forward bases as well -- detailing branches for support of troops operating on separate axes.

The special features of troop actions on separate axes and the limited possibilities for movement between them dictate the need to set up groupings of rear services units and facilities providing the troops with materiel-technical and medical support at least to the depth of the front task. Therefore, on each important separate axis there should be deployed branches of front bases which are not dependent on the complement of the operating troop grouping.

It will be much more difficult to control branches of front bases deployed on separate axes at a considerable distance from the front bases and the rear control post. In connection with this, it is best under certain conditions, especially on secondary axes, to temporarily resubordinate some front base branches and front motor transport to the deputy army commanders for the rear.

We wholly support the point of view of many authors who consider that reliability in the work of front bases must be further increased by expanding their legal authority in organizing materiel support of troops. The front base must indeed have the authority to independently resolve questions of issuing and transporting materiel to the troops operating on an operational axis.

Reliability in the materiel support of troops is largely determined by the timeliness with which front and army bases and their branches are relocated. The experience of many exercises indicates that the most favorable results are obtained if, with a rate of troop advance of 50 kilometers per day, the mobile army base is relocated by the end of every second day of the operation and the front base branches -- by the end of every third day. As regards the army, it is planned for army motor transport, during the first days, to transport materiel from the forward front base (front base branch) to the division depots and return to the old disposition area of the mobile army base; during the second day, the motor transport proceeds to the forward front base (front base branch) for cargo, transports it to the division depots, and goes to the new disposition area of the mobile army base. If there is a substantial increase in the length of the haul, the army transport can, on the second day, proceed immediately from the front base branch to the new disposition area of the mobile army base, from which the divisions will transport the materiel with their own transport.

In a mountainous theater of military operations, where there is an extremely limited number of railroad lines of transportation, the mobility of front bases, and their capability to function when cut off from railroads, acquire particular importance.

At present, in view of the inadequacy of motor transport, complete relocation of front bases over unpaved roads is virtually ruled out: to relocate only one forward front base with supplies for two days would require about 3,500 to 4,000 vehicle trips (400 to 800 vehicle trips for a branch of a forward front base). The need for such relocation, however, is beyond doubt, since, by the end of an offensive operation, the distance between the forward front supply base and the main troop grouping (even if it is by then located in the forward sector of a restored railroad) will reach 500 to 550 kilometers and will become even greater as the operation continues.

It is clear that with such a separation of the main supplies from the troops, the continuity of the materiel support of large units and units will be threatened.

The solution to this situation, in our view, is to increase the mobility of front bases. It is necessary to introduce motor vehicles with a heavy load capacity and cross-country capability, to somewhat increase the motor transport means included in the front rear services, to increase the rates of restoration of railroads in the mountains and the laying of pipelines, to equip front depots with lighter and more portable equipment, to increase the level of mechanization of loading and unloading operations, and to introduce container and packaged shipments.

Another important task which must not be forgotten is the further improvement of the organizational structure of certain rear services units and facilities of the army and tactical rears.

If an army has at least two separate axes of troop combat actions, the mobile army base must have the capability to detail an independently operating branch from its own complement. This task cannot be carried out until the base headquarters and the army depots have organic branches within their own complement.

Because of the increasing rates of advance and the abrupt situation changes, troop supplies of materiel are kept on board motor transport at all times. Thus, the functions of transporting and guarding materiel are for practical purposes concentrated in the motor transport subunits.

Legally, however, the commanders of transport subunits have no responsibility for the safekeeping of materiel. The responsibility rests with the chiefs of the depots, who in literally all matters are dependent on the commanders of the motor transport subunits.

In this connection, the need arises, in our view, to combine motor transport units and subunits with depots, both within the regiment and the division, forming a unified organic element -- materiel support companies and battalions.

The establishment of unified materiel support subunits will increase mobility in supplying and will make it possible to the fullest extent to carry out the timely dispersal of materiel supplies and the organizing of loading and unloading operations and to take all measures for security and defense.

Under the conditions of a mountainous theater of military operations, it becomes particularly important to prepare, operate, and maintain lines of transportation.

The extremely limited possibilities for using railroads and, most important, their great vulnerability to means of destruction make motor roads the most important, and sometimes even the only, channels for transport and evacuation. In the first few days of an operation, before road large units and units arrive to join the front (armies), particularly difficult conditions will arise on the front lines of transportation.

The use during this period of local road organizations of the main administration of highways, and the partial allocation of troop subunits for the preparation and technical coverage of motor roads, cannot wholly save the situation. This is soundly confirmed by all postwar experience.

It appears to us that the fundamental resolution of the question lies in further increasing the combat and mobilization readiness of the military district road service. Instead of the existing road depots, it is necessary to set up within the military district at least one regular road traffic control brigade which would include at least two road traffic control battalions; within the army it is necessary to have a road traffic control battalion at reduced strength.

On the basis of the civilian road organization (road repair and construction administration, bridge repair and construction administration, road-building district, road maintenance section, and others), road columns should be organized, which will make it possible to significantly reduce the mobilization readiness times for road large units and units and will promote their combat coordination. It is also very important to plan for the formation of movement control subunits and a provost and traffic control service with minimal readiness times.

The existing principles for employing road troops during an operation are basically acceptable for the conditions of a mountainous theater of military operations. It must only be noted that the road troops arriving for duty with the front (armies) must, because of their limited strength, be employed only for expanding and maintaining motor roads beyond the state

border, while local road organizations are made responsible for organizing the technical coverage of the roads on their own territory and the local military commissariats are responsible for controlling movement and maintaining order on the roads.

In connection with this, it is obviously beneficial, with the beginning of combat actions, to resubordinate the main administration of highways of each republic operationally to the chief of the directorate of motor road service of the front military transportation service.

It also becomes of fundamental importance under the new conditions of conducting operations in a mountainous theater of military operations that there be road large units and units within the front rear services.

As the experience of exercises shows, the total volume of work for road support of troops in an offensive operation may consist of:

-- servicing of roads: 6,500 to 7,000 kilometers of main roads, and 6,000 to 6,500 kilometers of secondary roads;
-- restoration of roads: 3,000 to 3,500 kilometers of main roads, and 3,000 to 3,500 kilometers of secondary roads;
-- restoration of bridges -- up to 7,000 linear meters.

Proceeding from this, it is urgently necessary for the front to have at least three road traffic control brigades, two or three separate road construction battalions, and two or three separate bridge construction battalions.

Bodies of water, if there are any in the territory of the mountainous theater of military operations, create favorable conditions for bringing up supplies from the Center to the front and for shipments within the front.

As experience shows, the limiting factor in organizing water shipments is not the ships but whether there are prepared ports and docking points.

Since the ports, both in the Soviet and the foreign parts of the water bodies, may be destroyed, particular importance is assumed by the problem of improving the organization of unloading

in the roadstead at an unprepared shore and the corresponding radiation exposure of troops and rear services organs of the front. It must be said that questions of organizing loading and unloading activity at an unprepared shore, of calculating and stockpiling roadstead means, of preparing temporary moorings, and of using pipelines to transport fuel over the sea floor, as well as many other questions, have not found sufficient reflection in the practical work of rear services organs and have also been poorly worked out theoretically. In connection with this, the military district conducted experimental exercises in 1963-1964 jointly with a fleet and a flotilla on questions connected with the loading (unloading) of supply cargoes at an unprepared shore.

The exercises showed, in particular, that on the seashore it is possible to set up transshipment bases for transferring cargoes from railroads to sea transport and from sea transport to the shore. If there are no mooring facilities, it is possible to use the non-mooring method for the transmittal to sea transport of such materiel as missile propellant, ammunition, fuel, food, and personal gear. The non-mooring procedure for fuel tankers at an unprepared shore can be carried out by means of a mainline pipeline (PMT-100) laid on the sea floor. The exercises showed the safety of prolonged immersion of the army pipeline and consequently, the possibility of transferring large quantities of fuel in short periods of time. According to our calculations, about 3,600 tons of fuel can be transferred over three PMT lines in 24 hours.

Missile propellant can be taken on or discharged without mooring, by means of the PSTK-100 pipeline, laid on rafts or in a cable suspension.

The exercises confirmed the possibility of assembling and setting up PRP-52 collapsible floating moorings and of constructing temporary wooden moorings on piled piers with forces from combat engineer subunits. To link the mooring with the shore, the KMM-2 truck-mounted treadway bridge set, which is in service, was used effectively. Taking into account, however, that it will not always be possible to use troop KMM-2 sets, it is obviously necessary to include such sets in the table of equipment of servicing subunits of the front rear services.

It should be pointed out that there are many more unresolved questions in organizing shipments by water.

Over the past few years there have appeared in our model basins ships constructed according to the latest technology and suitable for shipping almost all types of military equipment and cargoes, including missile equipment; but for some reason, the majority of them do not have cargo booms and will not be suitable for operating away from ports. The cost of loading and unloading equipment is an insignificantly small amount in proportion to the cost of the ship itself, and we consider such "economy" completely unjustified. It appears to us that no new shipbuilding project should be realized without taking military requirements into account and without the coordination of the Central Military Transportation Directorate.

The question of linking up army and fleet pipelines has not been resolved. It is clearly necessary here to proceed along two lines: to make it mandatory for all tankers to have adapters to our pipelines and for all front fuel depots to have a supply of adapters for the main types of tankers.

We would like to dwell further on one question whose resolution will contribute greatly to the combat and mobilization readiness of the front rear services as a whole.

At the present time, railroad troops exist in order to provide technical coverage during the restoration of railroads; there is no doubt as to the desirability of having such troops. Unfortunately, there are no such elements either in the road service or aboard sea transport. It appears to us of the utmost importance to establish road troops and battalions for the restoration of ports and mooring facilities. In peacetime they, like the railroad troops, being run on a self-supporting basis and carrying out tasks for the national economic plan, will pay for themselves completely.

Serious problems arise in organizing the materiel support of troops operating under the conditions of a mountainous theater of military operations. For this reason there is a great need to dwell on some of the fundamental questions of organizing the supplying of front troops with missile propellant, conventional fuel, and ammunition.

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Based on the experience of exercises, front troops expend over 600 tons of missile propellant for an operation, and together with the units of the air defense of the country attached to the front for supply purposes -- 1,200 to 1,400 tons. The front requirements, determined from the fuel expenditure and the necessary reserve and supplies of fuel by the end of the operation, are about 3,000 to 3,500 tons.

With regard to the conditions of a mountainous theater of military operations with its unstable lines of transportation with the deep rear, these supplies, in our opinion, should be stockpiled in peacetime.

It is also necessary to note certain shortcomings in the missile technical support, which must be eliminated as rapidly as possible. We cannot, for example, consider as normal the absence of an established system of echeloning reserves of missile propellant.

We consider it necessary to have within missile technical units mobile reserves of missile propellant providing for two days' operation by a mobile missile technical base to assemble missiles. For this purpose there must be in missile technical brigades a mobile missile propellant depot with reserves placed on motor transport.

Missile brigades must also establish reserves of missile propellant such as to provide for filling one missile at each launcher.

In the branch of the front missile propellant depot, in our opinion, there should be enough missile propellant for two days' requirements of the mobile missile technical base and the surface-to-air missile units attached to it for supply purposes.

The remaining missile propellant reserves must be stored at front depots.

The accepted system for locating and relocating branches of front missile propellant depots which are to be moved up immediately after the mobile missile technical base during an operation, and their T/O&E, also require further improvement.

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The exercises showed that under the conditions of a mountainous theater of military operations, branches of front missile propellant depots should be placed as close as possible to the mobile missile technical base, thus guaranteeing stability and timeliness in supporting the troops. Taking into account that the time for transporting missile propellant from the depot branch to the mobile missile technical base must not exceed four to five hours, it is desirable to place the front depot branch itself 25 to 30 kilometers from the mobile missile technical base.

Under conditions of a rapid rate of advance, branches of front missile propellant depots must possess cross-country capability. However, the T/O&E of the existing missile propellant depot provides for relocating the depot by railroad and the branches by motor transport allocated by front motor transport units.

In order to transport storage tanks and various other equipment, each base branch must be allotted 20 to 25 trucks with sides. If the branches are deployed and are full to capacity, about 50 more special motor vehicles will be required.

It is considered more advisable and more economical for the missile propellant reserves of each front depot branch to be kept entirely on board special motor transport, these branches having been made truly mobile. The best suited of all for this purpose are acid tanks and fuel tanks mounted on the KRAZ-214 truck, since the ZAK-21P oxydizer tanks with which missile propellent transport units are equipped have very little maneuverability under conditions of mountain roads and sharply reduce the speed at which motor columns can proceed.

Further improvement is also required in organizing the supplying of troops with conventional materiel, especially ammunition and fuel.

Judging by the experience of exercises, the materiel outlays of a front in an offensive operation in a mountainous theater of military operations may be: in ammunition -- 66,500 tons, in fuel -- 129 thousand tons, in food -- 7,700 tons, other supplies -- 30,500 tons, and altogether 233,700 tons. These outlays are estimated for an operation lasting 12 to 13 days and conducted at

a rate of 50 kilometers per day. They include materiel for replenishing losses, as well as supplies for a second operation.

We are firmly convinced that reserves of materiel which are set up during peacetime must provide for what will be expended in the initial operation (taking into account the replenishment of possible losses) and for the forming from what remains by the end of the operation, of up to 80 percent of the possible expenditure during the next operation. This will make it possible to go over to the next operation without an operational pause. In other words, the military district must have at its disposal reserves comprising, as a minimum, 200 percent of the anticipated expenditure in the initial operation. There naturally comes to the fore the serious problem of echeloning these reserves properly by the beginning of the operation and of distributing them suitably among the operational axes.

In an operation with deployment of front (army) depots, reserves of materiel may, in our view, be echeloned as shown in the table (page 19).

In the proposed echeloning, the reserves of materiel in the front are larger than those existing at present: for artillery and mortar rounds by 30 percent, including an increase of 40 percent in mobile reserves in the troops; for antiaircraft rounds by 20 percent; and for motor vehicle gasoline by 16 percent, including an increase of 20 percent in mobile gasoline supplies in the troops. They provide for front requirements for 10 days, including ammunition supplies for the armies for four to five days and fuel supplies for five to six days.

Another circumstance should be mentioned, which argues in favor of the proposed echeloning of reserves: reserves of ammunition and motor vehicle gasoline, in the transport of large units and units, are delivered up to the amount of their possible average daily consumption in the operation, and this provides for continuity in the transport process, i.e., the capability for through transmittal of cargoes in transporting them from the army to the large units and from the large units to the units.

In connection with the proposed echeloning of reserves of materiel, there arises the question of the possibility of accommodating front reserves in the available complex of front

ammunition and fuel depots. Calculations show that 12 or 13 fuel depots and up to four ammunition depots are required for this, which does not exceed the existing capabilities of the front.

The growing requirements of troops and the special features of mountainous theaters of military operations testify to the need for very careful organization of the transport of materiel.

The experience of exercises makes it possible to reckon that in a mountainous theater of military operations, mainly front transport must be used for building up reserves at branches of front bases, while the further shipment to the mobile army bases and to the troops must be carried out by forces of the armies and the troops. Such a procedure for using front motor transport is an outgrowth of its limited capabilities and of the need to distribute the load uniformly to front motor transport, on the one hand, and the motor transport of the army and the troops on the other, since there may be 13 to 15 motor vehicle battalions in the front while in the armies and divisions their number may reach 24 or 25.

The use of front motor transport for moving up front reserves does not exclude, on certain axes and at certain stages of an operation, other variants of employing it. In particular, in the zone of an army operating on the axis of the main front attack, front motor transport may be used to transport materiel directly to the mobile army base. Such an operating procedure for front transport on the main axis arises from the difficulties of organizing the transport by army and troop motor transport "on its own," in view of the fact that while the operational troop disposition is fully supplied, there is a limited capacity on the axis. As a result, it is too difficult, and sometimes totally impossible, to dispatch army (troop) motor transport to front depots in view of the one-way roads, the large number of bottlenecks on them, and the congestion of the roads with shipments proceeding from the rear to the front.

We cannot fail to remark that the T/O of motor vehicle battalions falls far short of fully satisfying the requirements of a mountainous theater of military operations. Under mountainous conditions the two-axle trailers available in all motor battalions are unsuitable. It has become necessary to replace ZIL-164 trucks with trucks having greater cargo capacity

and, most important, greater cross-country capability.

Of the total volume of shipments to the troops of about 126.8 thousand tons, about 66.7 thousand tons, or 53 percent, are fuel, and the average daily fuel requirement of a combined-arms army operating on the main axis may be up to 900 tons. This explains the ever increasing importance of pipeline transport, which, as is known, possesses great capacity and survivability.

Special exercises conducted during 1962 to 1964 emphasize the reliability and high capacity of pipelines even under the conditions of a mountainous theater of military operations. In the exercises, the average daily rate of assembling a pipeline was brought to 30 kilometers and the rate of laying it, with fuel delivery to the terminal point of the line, was 27 kilometers per day. Pipeline capacity was 600 tons per day. It must be noted that the pipeline ran through several mountain passes and was laid under unfavorable climatic conditions. If the number of pumping stations in a mountainous section of pipeline is increased, then the capacity of the pipeline may reach 780 tons per day.

In the exercises it was established that the quantity of fuel transported by pipeline within the front is only seven to eight percent of the total volume of fuel shipments to the troops. The front rear services must include at a minimum one PMT-100 pipeline brigade composed of four battalions. We are proceeding from the fact that front pipeline units must ensure the delivery of fuel at least in the amount required by the combined-arms army operating on the main axis.

It is of considerable interest to determine a procedure for employing pipeline units. Experience from front command-staff exercises and games makes it possible to draw a number of general conclusions in this regard, the essence of which amounts to the following:

-- there is no doubt as to the necessity of using pipeline units for supplying the main front troop grouping with fuel;

-- in order to ensure stable delivery of fuel and full use of the pipeline, the line must begin from one of the military district depots, as close as possible to the state border and located near a railroad station;

-- it is best to use the pipeline units available within the front for laying lines along the railroad line on the territory of contiguous states, having in mind their future link-up with permanent pipelines of the enemy.

In conclusion we shall speak very briefly of the placing of the rear control post. In a number of experimental exercises we have established that in a mountainous theater of military operations the area for locating the rear control post may be limited to six to eight square kilometers, which is 1.5 to two times less than the usually accepted norm. The irregular nature of the terrain fully ensures the survivability of the rear control post and at the same time creates favorable working conditions. The practice which has developed, of locating directorates and departments at the rear control post by groups, is justifying itself.

The rear control post must also be located somewhat nearer to the command post than under ordinary conditions. The average norm for this distance may be taken as: for the front rear control post -- 15 to 20 kilometers; and for the rear control posts of armies -- five to ten kilometers. With such a distance, stable communications and close cooperation between the command post and the rear control post are achieved.

Many specific features characteristic for mountainous theaters of military operations can be noted in organizing the medical support of operations, the security and defense of the rear services, and its control. But unfortunately, the scope of this article does not permit us to dwell on all aspects of rear services support of an operation. As regards the problems touched upon in the article, we consider that a creative and constructive exchange of opinions would be very useful from the practical and the theoretical viewpoints.

	In the army						At front depots			
	In the troops									
	In the battalion	In regimental transport	In division transport	Total	At the mobile army base	Total	Forward front base	Rear front base	Total	Total within front
Ammunition:										
Small arms	0.65	0.15	0.2	1.0	0.15	1.15	0.5	0.75	1.25	2.4
Artillery and mortar	0.6	0.4	0.4	1.4	0.25	1.65	0.8	0.85	1.65	3.3
Tank	1.0	0.75	0.5	2.25	0.25	2.5	0.6	0.65	1.25	3.75
Antiaircraft . . .	1.0	0.5	0.5	2.0	0.5	2.5	1.0	1.0	2.0	4.5
Fuel:										
Motor vehicle gasoline . . .	1.0	0.4	0.4	1.8	0.4	2.2	1.0	1.0	2.0	4.2
Diesel fuel . . .	1.25	0.5	0.5	2.25	0.7	2.95	1.1	1.15	2.25	5.2
B-70	1.0	0.5	0.5	2.0	0.5	2.5	0.75	0.75	1.5	4.0
High-octane gasoline . . .	4.0	---	---	4.0	1.0	5.0	1.75	1.75	3.5	8.5
Aviation fuel	4.5	---	---	4.5	1.5	6.0	1.75	1.75	3.5	9.5