

JPRS-UMA-92-034
16 SEPTEMBER 1992



**FOREIGN
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JPRS Report

DEFINITION STATEMENT A

Approved for public release;
Distribution Unlimited

Central Eurasia

Military Affairs

19980116 080

DTIC QUALITY INSPECTED 2

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U.S. DEPARTMENT OF COMMERCE
NATIONAL TECHNICAL INFORMATION SERVICE
SPRINGFIELD, VA 22161

Central Eurasia

Military Affairs

JPRS-UMA-92-034

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16 September 1992

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CIS/RUSSIA ARMED FORCES

Problems of Absorbing Officer Corps Into Economy Highlighted

92UM1328A Moscow LITERATURNAYA GAZETA
in Russian No 31, 29 Jul 92 p 10

[Article by Kapitolina Kozhevnikova under the rubric "At the Command 'At Ease!': "The Colonels Are Leaving the Ranks and Turning up at the Smolensk Bridgehead"]

[Text] Lt Gen Vladimir Stepanovich Krayev, army commander, took off the attractive uniform at the age of 53, donned work clothes and became a farmer in the remote village of Serteya in the Smolensk area. The Western Dvina flows through the area, there is no end to the forests, and thick mushrooms, cranberries and blueberries grow there. The first, idyllic impressions rapidly disappear, however, before the harsh reality of life. And that harsh reality involves getting up early, feeding the livestock, plowing the soil, yearning for the family which is not yet prepared to share his lot.

"Stepanych," his neighbors would enquire, "couldn't you find anything more refined to do in this Russian state?"

What could he, the general who had grown tired of his army, of our peacetime without peace, say to them? Poland, Lithuania, terrible Sumgait with its atrocities, the indecisiveness of the politicians, the senseless orders.... There were things to make him run away to avoid seeing and hearing them, to immerse himself in the land. But he was barely given a respite. Once again the trumpet sounded. They persuaded him in Smolensk that it was not for a general to bide his time in a trench. He needed to fight for the existence of the entire region in the difficult conditions of the economic reform.

He had to plunge into the unknown once again. Krayev works today beneath the unkind view of yesterday's superiors, who lived so well in the times of stagnation so dear to their hearts. He is head of the administration of Velizhskiy Rayon. He lives a spartan life in his office, sleeping 4 hours a day. And we talk about new times, about how we need pragmatists and not enthusiasts today. But what about the extreme circumstances?

The entire nation is in these circumstances today. Is it surprising that a person with an acute sense of honor and duty would choose precisely this path?

Tempting as it is to go into a biographical description of the eccentric general (and that is how he is regarded by many in Velizh), I started this article for a different reason. Although one does not hear much about farming generals, there are a great many colonels and majors who have taken the controls of a tractor. Krayev's action was not so exceptional, then. Perhaps it was even typical in many ways. One sees in it a trend taking shape. The military are being drawn to the land. Can we now speak

of a third wave in the development of Russian farming? Following those from the cities and villages, officers released from the army have felt the urge to become their own bosses. When one considers the enormous number of able-bodied, physically strong people who were under arms in our militarized state—and many of them were peasants themselves or the sons or grandsons of peasants—it is clear what an enormous reserve we have for repopulating the depopulated, exhausted and dejected rural area.

Both of them, our rural area and our army, are experiencing a serious crisis. The military are joining the refugee avalanche rolling over Russia. It is bad enough for an officer to be unemployed, but even more terrible for him to be homeless. Russia is dragging out the withdrawal of troops from the Baltic area for one main reason. There is nowhere to house them, to settle them, to provide them with a tolerable life.

And without realizing it, the rural area extended a hand to the military. It was not the distasteful kolkhoz, of course, which tugged at the hearts of officers, but free farming. The Army, a Russian information center (RITs), conducted a survey among the officers. Almost 12% of them answered "On the land." when asked where they would like to work following demobilization. This is the birth of new hopes, new plans. It is a long and difficult route from birth to implementation, however.

Gen Krayev is acting as a catalyst for his military fellows, of course, and for all those who have heard of him. People write him, come to see him. A Cossack farm has sprung up on the edge of the little village of Bolshiye Karyaki. Five officers who got the urge to become farmers have settled in the former home of kolkhoz livestock workers. They got very little, only 120 hectares of land, in the swampy loam. A large-scale farmer would consider that nothing. But that depends upon what one does with it. The officers got the idea of fattening steers, setting up an apiary (the father of one of them with a knowledge of beekeeping agreed to move there), building two ponds with carp and geese, raising fur-bearing animals.

But these are just plans for now. The officers themselves are still sleeping on hard cots. Their families are scattered: one in Byelarus, others in various parts of Russia. They are coming together now. It is vacation time for the children.

When I arrived at Kazachiy, there were two managing the farm: Pavel Vasilyevich Belogolovyy and Pavel Andreyevich Bobylev. At first they complained in unison about the miserable fate of the officers.

"They drive us out of the army. But how are we to blame for the fact that the Soviet Union has collapsed and no one any longer needs a big army? We completed military academies, served conscientiously. Now they say: 'Get by however you like, however you can.'"

"I lived in 19 different government apartments during my years in the service. I had neither my own housing, nor furniture nor a car. Only boxes for the endless moving of my junk. There is no turning back, though. We have to make a life for ourselves here.

Krayev is helping them build a life for themselves. They received a nice loan from the bank. They bought equipment: two tractors, a combine, a plow, a mower, a pickup. That is quite a lot. They are building a road to the future homes. Difficult and expensive as it is to start a home of one's own today, they have to. Otherwise, what kind of farmers would they be? They could obviously not overcome such a burden without Krayev.

The farm had barely come into existence, when it started to fall apart. There is fierce natural selection. Only the strongest and most tenacious muzhiks survive. The rest, unfortunately, are doomed to ruin. One should have no special illusions. The insane jump in the cost of farm equipment, fuel and fertilizer has become a rigorous test of the newly-made farmer. One cannot say whether it will be more difficult for the kolkhoz member or the free farmer. While granting the freedom, our government at the same time creates such insufferable economic conditions for farming the land that this freedom may prove to be unwanted by anyone.

Is this not why the farmers from among the former military men are drawn together? They put together associations and cooperatives. And the Kazachiy farm is also an association, a small cooperative. The land belongs to each owner. Separate homes are built, of course, but they will cultivate the land and look after the livestock together. A mini-kolkhoz?

The colonels threw up their hands in unison and said:

"Not at all! We have a different concept for owning the property and sharing the profits."

The rural store was abandoned. More precisely, only the skeleton remains. The officers have bought it. They will make repairs and sell bread and other essentials in it. This is out of pure altruism. It is painful to see the local women carrying loaves of bread from afar in their string bags.

But let us be realists. The officers are not always greeted with hospitality in the village. Sometimes they are simply turned away. The nearer the time for the land to be sold, for actual possession to be taken, the tighter the peasant holds onto his livelihood. But the privatization of the kolkhozes is now underway. Not even the most ancient women will give up her share, her allotment. "This is mine," she will say. "I can do with it as I wish. If I can't work it, my children and grandchildren will come from town to help me. Or I can lease it out." People recently separated from the land are feeling its force, its power over them. The tired old abstract saying that "the earth is our treasure" is taking on a new, now genuine reality.

Our hapless people are grasping for land today as for the anchor of salvation. And it is becoming increasingly more difficult for the newly-made farmers to obtain it. Newcomers from the military are certainly no exception. One thousand officers were talked into going to Tver Oblast to become farmers. They believed what they were told and became enthusiastic. When it came time to distribute the land, however, the Tver authorities allocated the military... swampland. The latter twisted and turned, and went back where they came from.

Most of the officers want to establish themselves in the oblasts of Central Russia. The administrative heads of Kaluga, Tula and other oblasts gladly make promises to the military. They make promises but do not give them land. "Find yourself some rich sponsors," they say. "Then we will know what good, of what benefit, you will be to us." The market dictates its own stringent rules, after all. And despite the resistance of certain circles in the society, the land will be thrown onto the market any time now. There is greater pressure for land today than during the first years of development of the movement to the farm.

The military are a vigorous and energetic people. They are knocking on all doors loudly and persistently. But how far can one go with persistence alone? We need a special state program for establishing peasant holdings with reserve officers. Such a program was set up at one time in the USA to help those Vietnam veterans who wanted to become farmers, to go into agrobusiness. Major protective measures were passed, and financial support was provided. Land was found for the demobilized military. And given the universal private ownership of land there, this was far more difficult to do than here, where we have thousands of abandoned villages, where we have vast expanses which do not yet belong to anyone.

The army itself possesses large material resources and equipment with which to help its people establish themselves in the rural area. The farmer does not need Kalashnikov rifles, of course (although they are now permitted to own weapons to protect themselves against racketeers and bandits), but trucks would come in very handy. Gen Krayev had this to say:

"We wrote the Ministry of Defense of Russia with a request that trucks and other equipment be sold to the farming officers at a discount. We received no reply. The vehicles will in any case be scattered about without any visible benefit. And how much help they could provide from our own army!

A.V. Rutskey has a plan for settling entire military divisions on the land and building large settlements for them. Sober-minded people are afraid that this smacks of sad memories of the Arakcheyev settlements. Will these not be just new kolkhozes with military discipline and rigid organization. These fears are not so very groundless.

It is not surprising that the colonels in Bolshiye Karyaki unanimously declared they would not even consider a kolkhoz. They have chosen free labor and not the torment of collective work.

I learned of an interesting concept of Leonid Ivanovich Bilash. No, proponents of rigid pragmatism have not yet become extinct in Rus. For several years now this man has worked on the problem of the adaptation of servicemen in agriculture. He proposes building large, self-contained cities for those discharged from the army. Farmers, members of small cooperatives and various enterprises could operate there, the latter mainly in the processing of farm produce, of course—both their own and that which now spoils each year in the fields of the Kuban.

Bilash has gone to Rutskey, to Gaydar and the Ministry of Defense. He has not yet caught their ear. That is a pity. According to Leonid Ivanovich's calculations 200,000 military men and their families could be settled on land allocated in the Kuban. Here is the address for anyone interested in Leonid Ivanovich Bilash's plan: 352175 Krasnodar Kray, city of Gulkevich, Timiryazev Street, Building 2.

What is one to do if he does not know a general? Even in this situation the officers in Moscow are not sitting around idly. They pester their ministry and the Russian government. Now we have a decree with a long name passed by the Supreme Soviet of Russia on the provision of assistance for the establishment of farm holdings for those released into the reserve. Things are going the way they usually do for us, however—slowly, creaking and groaning—especially when it comes to agriculture. At each stage the documents are held up, become dog-eared, and the ideas and plans age and grow obsolete before one's eyes.

The officers' peasant holdings could ultimately become a perceptible underpinning for the exhausted Russian village. Our majors and colonels are accustomed to hardships.

If our government dallies with the implementation of its own decrees, one would not expect the military to accept this. They will loudly make themselves heard and state their needs. The reduction of the armed forces will reach its zenith toward the end of next year. The military will roll in like a wave from various areas, where their weapons are being removed from them even now. Failure to take advantage of the desire of these strong fellows to forge their swords into plowshares would be an inexcusable blunder and a sin before our entire, underfed people.

Servicemen Polled on Religious Beliefs

92UM1421A Moscow KRASNAYA ZVEZDA in Russian
25 Aug 92 p 2

[Article by Candidate of Philosophical Sciences, Lieutenant Colonel Aleksandr Marchenko: "The Army's Spiritual Life Is not a Place for Populist Exercises"]

[Text] It's no secret that the population's piety has substantially increased recently. Many people, after the collapse of the former ideals, are attempting to find spiritual support in religion. These processes somehow or other also affect the Armed Forces.

No matter how you relate to that, it is currently already impossible to not take into account "the army and religion" problem. Commanders and assistants for educational work with personnel need clear knowledge about what they have to work with today. Research of this issue was conducted in July 1992 in order to offer them assistance in this. More than 1,000 servicemen were surveyed.

Distribution of Servicemen by Typological Groups

believers	25%
—religious activists	5%
fluctuating between belief and non-belief	35%
nonbelievers	30%
atheists	10%

Based on the analysis of the accumulation of indicators, the researchers came to the conclusion that 25% of servicemen can be included among believers (see Table 1). But then again, approximately only one fifth of them can be characterized as "religious activists" who are attempting to follow a religious belief. A third of those surveyed fluctuate between belief in God and non-belief and almost as many are passive nonbelievers, and one tenth are atheists who are not ashamed to express their negative attitude toward religion. In other words, the situation is approximately the same as the one that has developed in society: interest in religion and religious values is growing and an increasing number of young people are turning to a belief in God in their search for spiritual reference points.

The problem of utilizing the spiritual potential of religion in the education of servicemen, already acute and controversial, is acquiring special significance in this situation. A negative attitude toward believers was cultivated in the army not so long ago, they were forbidden to carry crucifixes or to attend church, and these trends have been preserved in some places. On the other hand, an impatient desire is being manifested in some units and on some ships to return to the traditions of the Russian Army and Navy, including religious, in a single moment. We know of cases of consecrations of ships and barracks, the formation of religious communities at garrisons, and other activities, as a result of which it is as if piety is becoming mandatory. We have had the opportunity to observe how servicemen of units of one of the currently sovereign republics have taken the oath while placing their hands on the Bible. The officers' reactions to this were unambiguous and many of them expressed the opinion that this type of ritual is once again "lumping them altogether".

The contradictory nature of opinions and assessments among servicemen on the problem of "the army and religion" was totally reflected in the research that was conducted. During the surveys, it was revealed that the majority of servicemen would want the most friendly relations between the army and the church based on mutual support and comprehensive contacts under contemporary conditions. While discussing the problem as a whole, the majority of servicemen think that the coming together of the army and the church and the use of religious spiritual values in work with personnel will have a positive impact on the culture of servicemen's conduct in their mutual relations. Meanwhile, the most contradictory opinions are being expressed on the issues of practical steps for the coming together of the army and the church.

Table 2. Servicemen's Views on the Issues of Army and Church Interrelations

	for	against
opening cult institutions on military garrisons	61%	17%
establishing close interrelations between the army and the church	59%	1%
creation of religious communities of servicemen	41%	18%
introduction of authorized positions for clergy	34%	19%

So, a single point of view has not developed with regard to introducing a clergyman as an authorized position in the troops (see Table 2). A third of servicemen are "for" and nearly as many are "opposed". The idea of creating religious communities and spiritual institutions at large garrisons enjoys somewhat greater support. However, there are also quite a few opponents to that idea, especially among senior officers. The opinions of the people surveyed also strongly differ on the issue of introducing alternative service for believers whose faith does not permit them to bear arms. There are the greatest number of opponents to that idea among compulsory service military personnel.

It seems that we should not activate events in the situation that has developed when public opinion among servicemen on the problem of "the army and religion" has not matured. Research indicates that practical steps in that matter must be well thought-out otherwise that may encounter rejection and even derision. By way of illustration, in our view, the widely discussed question of introducing the institution of military chaplains into the army is inappropriate at the present time. The effect of this introduction without relying on sympathetic public opinion could turn out to be negative both for army and also for church structures. The appeals to immediately begin forming the institute of military chaplains that have appeared in the press recently are not based on knowledge of the actual lives of the troops but are competitive and populist in nature.

As we have already stated, the work that has been conducted by our Military-Sociological Research Center is one of the first on the problem of "the army and religion". We intend to continue the study of this issue. Much in the scale and depth of the sociological and psychological research that has been conducted will depend on the assessment of their significance by society and by the servicemen themselves. We invite the cooperation of interested individuals and organizations.

CIS: POLICY

Yeltsin Decree on Financing of Housing

*92UM1369A Moscow ROSSIYSKIYE VESTI
in Russian 30 Jul 92 p 4*

[Decree of the President of the Russian Federation on Supplementary Measures for Financing Construction and Acquisition of Housing for Servicemen]

[Text] In the aims of improving the supply of housing for persons of the officer personnel, warrant officers [praporshchik, michman] and reenlisted servicemen, I hereby decree:

1. The Russian Federation Government is to provide for allocations in the budget for 1992 and the first half of 1993 for completing a total housing area for servicemen amounting to 3,397,000 square meters, and for persons discharged from military service in a volume of 2,098,000 square meters broken down for the years as follows: at least 60 percent in 1992, and 40 percent in the first half of 1993.
2. The executive bodies of state authority in the republics, krais, oblasts and autonomous formations as well as the cities of Moscow and St. Petersburg are to provide housing (individual apartments) for sale in the established manner to the Russian Federation Ministry of Defense, to the Russian Federation Ministry of Internal Affairs, to the Russian Federation Ministry of Security, to the Russian Federation Ministry of Architecture, Construction and the Housing-Utility Systems (to the Main Directorate of Railroad Troops), to the Committee For Guarding the State Frontier, to the Russian Federation Foreign Intelligence Service, to the Federal Agency of Government Communications and Information under the Russian Federation President and to the Russian Federation Main Administration for Security, upon their request, for providing housing to apartment-less servicemen or those who need an improvement in their housing conditions.
3. The Russian Federation ministries and agencies indicated in Point 2 of the current Decree are to provide gratis financial aid at the place of service amounting to 75 percent of the cost of the cooperative housing or a bank credit for the construction of individual housing with interest for the credit for those servicemen who have completed 10 or more years of unblemished and continuous military service in calendar terms, who have

joined the housing construction (housing) cooperatives or are carrying out the construction of individual housing, including the servicemen who under the current legislation have been granted the right to join such cooperatives and build individual housing at a different locality from the place of service. It is to be established that 25 percent of the designated amount of the gratis financial aid is to come from the nonbudget funds of the Russian Federation ministries and agencies as well as from the savings of budget funds at the place of their holding.

The remaining 25 percent of the cost of the cooperative housing or the bank credit received for the construction of individual housing with interest for the use of the credit is to be paid for from the money of the servicemen in rubles or foreign exchange.

4. The Russian Federation Ministry of Defense, the Russian Federation Ministry of Internal Affairs, the Russian Federation Ministry of Security, the Russian Federation Ministry of Architecture, Construction and the Housing-Utility Systems (the Main Directorate of Railroad Troops), the Committee For Guarding the State Frontier, the Russian Federation Foreign Intelligence Service, the Federal Agency of Government Communications and Information under the Russian Federation President and the Russian Federation Main Administration for Security are to determine the procedure for granting the gratis financial aid, including the use of nonbudgetary funds, as well as the personal money of the servicemen for building or acquiring housing.

5. The Russian Federation Ministry of Defense, with the agreement of the interested ministries and agencies, within a one-month period is to draw up and submit through the State Legal Administration of the Russian Federation President a draft of a Decree of the Russian Federation President on the procedure for selling and using the freed military property, having provided in it that the funds from the sale of this property will go to finance the construction and acquisition of housing and for resolving other social problems of the servicemen and the members of their families. Here the participation of the military administrative bodies (with the exception of the self-supporting enterprises and organizations) as well as the servicemen is to be banned in the activities of commercial structures.

6. The Russian Federation Government is to bring the enforceable enactments issued previously on these questions into conformity with the current Decree.

7. To be recognized as null and void are Point 7 of the Decree of the Russian Federation President of 19 February 1992, No 154, On Measures to Strengthen the Social Protection of Servicemen and Persons Discharged from Military Service and the Decree of the Russian Federation President of 27 February 1992, No 198, On Additional Measures for the Social Protection of Air Forces Servicemen.

8. The Decree will come into force as of the moment of its signing.

[Signed] **President of the Russian Federation B. Yeltsin**
Moscow, The Kremlin
21 July 1992
No 796.

Decree on Priorities of Military Policy of Russian Federation

92UM1310A Moscow *MORSKOY SBORNIK*
in Russian No 5-6, May-Jun 92 pp 17-20

[Text of decree and declaration signed by Russian Federation Supreme Soviet Chairman R.I. Khasbulatov under the rubric "Official Department": "Decree of the Supreme Soviet of the Russian Federation on Priorities of Military Policy of Russian Federation"]

[Text] The Presidium of the Supreme Soviet of the Russian Federation decrees that:

1. The declaration "The Priorities of Military Policy of the Russian Federation" (attached) be adopted.

2. This declaration be sent to the Government of the Russian Federation and published in its mass media.

3. It be recommended to the Government of the Russian Federation that it:

—specify in conjunction with the Main Command of the Combined Armed Forces of the CIS the expenditures for defense needs for 1992 in accordance with the priorities of the military policy of Russia, and submit proposals to the Supreme Soviet of the Russian Federation for their approval as part of the republic budget of the Russian Federation for 1992 with a regard for the necessity of financing plans for the creation, preservation and development of the mobilization capabilities of the defense industry;

—accelerate the pursuit of bilateral governmental negotiations of Russia with other member nations of the CIS and Georgia on the status of military formations of the armed forces of the former USSR, their all-round support and the coordination of military-technical policy;

—develop in the shortest possible time a state program of military organizational development, conversion of the defense industry and social protections for servicemen of the Russian Federation for the period to the year 1995;

—specify the functions and structure of bodies of state administration, ruling out redundancy in the resolution of defense issues, in connection with the formation of the Ministry of Defense of the Russian Federation;

—consider the issue of creating a State Commission for the Formation of the Armed Forces of Russia and the Re-Organization of the Defense Industry, as well as the

formation of state bodies responsible for the sale and recovery of the military hardware that is freed up; and

—review the standards for supporting the activity of the troops in accordance with the altered economic conditions and with a regard for the necessity of resolving issues of social protections for servicemen.

4. The Committee of the Supreme Soviet of the Russian Federation on Issues of Legality, Law and Order and the Fight Against Crime, in conjunction with the budget-control committee of the Supreme Soviet of the Russian Federation, will perform an analysis of the commercial activity of military and military-industrial structures and will submit the necessary proposals for the consideration of the Presidium of the Supreme Soviet of the Russian Federation.

5. The committees of the Supreme Soviet of the Russian Federation on issues of defense and security, on legislation, on the affairs of invalids, veterans of war and labor, and social protections for servicemen and the members of their families will accelerate the development and submission to the Supreme Soviet of the Russian Federation of draft laws on the most topical issues of military organizational development.

6. Envisaged for the purpose of increased monitoring of the resolution of defense issues on the part of the Supreme Soviet of the Russian Federation are:

- legislative approval of state programs for military organizational development and the conversion of the defense industry;
- approval of the structure and size of the armed forces of the Russian Federation simultaneously with the republic budget of the Russian Federation;
- the institution of monitoring of cadre policies in the armed forces and Ministry of Defense of the Russian Federation.

[Signed] *Chairman of the Supreme Soviet of the Russian Federation R.I. Khasbulatov*
Moscow, Hall of Soviets of Russia, 1 Apr 1992 No. 2637/1-1

Declaration of the Presidium of the Supreme Soviet of the Russian Federation on the Priorities of Military Policy of the Russian Federation

The declaration of sovereignty of the Russian Federation and its entry into the Commonwealth of Independent States, as well as the radical economic and social transformations currently being implemented, are evoking the persistent necessity of the immediate formation of the armed forces of Russia on the basis of a reorganization of the armed forces of the former USSR in accordance with the changed political realities.

The decisive transition in the foreign policy of Russia toward international collaboration and partnership is creating a real foundation for a substantial reduction of inordinate military spending as an essential condition

for the successful realization of economic programs and the removal of social tensions in society.

The proposals supported by Russia for the preservation of armed forces within the framework of the Commonwealth, at the same time, are not finding complete understanding on the part of the leadership of individual member nations of the CIS. The time frames for the resolution of all issues connected with the armed forces are being intolerably dragged out, and the uncertainty in their status continues to be preserved. The process of forming national armies is transpiring in unilateral fashion, without mutual agreements and without regard for the interests of the other member nations of the CIS.

The Presidium of the Supreme Soviet of the Russian Federation feels it essential, under these conditions, to accelerate the determination of the status of the military formations of the armed forces of the former USSR, and to formulate the armed forces of Russia on the basis of fundamentally new approaches to maintaining a sufficient level of defensive capability of the country that meets the requirements of the national security of Russia and the security of the Commonwealth overall.

I.

The armed forces of Russia should be intended exclusively for defending the independence and territorial integrity of the Russian Federation, as well as fulfilling the international obligations of Russia.

The level of direct threat of the unleashing of world wars, local wars and large-scale military conflicts is declining substantially under conditions of the reinforcement of international security, a strengthening of the mutual integration of the economies of the developed countries and their saturation with ecologically hazardous types of production. This makes it possible to cut back armed forces and reduce military spending considerably.

The strategic nuclear forces are a sufficient means of averting world wars aimed against Russia and the other member nations of the CIS, and their composition should be regulated on a treaty basis with a regard for the preservation of means that meet to the greatest extent the requirements for nuclear security and minimal cost.

Forces possessing highly accurate weaponry and the means of delivering it should become the principal factor restraining the unleashing of large-scale conflicts and local wars against Russia and the other member nations of the CIS.

The creation of highly mobile general-purpose forces with several groups of ground and naval forces is necessary for the efficient neutralization of possible local military conflicts.

II.

The extant structure of the armed forces of the former USSR within the framework of the unified defensive space of the CIS, along with the presence of close

all-round ties among the member nations of the CIS, predetermines the necessity of creating a system for their collective defense.

The joint defensive capability of the member nations of the CIS, with a regard for their various approaches to resolving military issues, could be provided for on the basis of multilateral and bilateral agreements and the creation of political and military bodies of the CIS based on principles of parity for the coordination of joint actions. The Presidium of the Supreme Soviet of the Russian Federation is appealing to the parliaments of the member nations of the Commonwealth with the proposal to render comprehensive support to the holding of negotiations for the purpose of concluding a Treaty on Collective Security for the CIS member nations.

The Presidium of the Supreme Soviet of the Russian Federation, at the same time, favors the fastest possible start to bilateral negotiations between Russia and the other member nations of the Commonwealth on defining the status of the military formations of the armed forces of the former USSR, their all-round support and the coordination of military-technical policy.

Russia for its part will display concern for the military formations of the former USSR and is ready to take them under its jurisdiction wherever they may be located, observing the sovereignty of the other member nations of the CIS therein.

III.

The Presidium of the Supreme Soviet of the Russian Federation considers it to be expedient to charge the Government of Russia with developing, in the shortest possible time, a unified state program for military organizational development, the conversion of the defense industry and the social protection of servicemen of the Russian Federation for the period to the year 1995.

It is being proposed that the extant procedure for the completion of military service, training of military cadres and overall legal foundations for the activity of the armed forces and social guarantees for servicemen, along with the existing system of support for the troops, by and large be preserved for this transitional period in the member nations of the CIS. A gradual transition to a contract system for the completion of service, as well as a substantial cutback in the number of cadets and attendees at higher military educational institutions, should be provided for therein.

Centers for the retraining of officers discharged from the ranks of the armed forces should be created over the course of 1992 on the basis of a number of the higher educational institutions, military schools and academies.

In developing the state program for military organizational development, the conversion of the defense industry and the social protection of servicemen of the Russian Federation for the period to the year 1995, particular attention should be devoted to the adoption of

special measures for a substantial increase in the amounts of construction of housing stock for servicemen and the members of their families.

A radical re-organization of the defense industry should be accomplished chiefly via the reformation of the system of orders for the development and delivery of arms and military hardware in accordance with the new political realities and priorities in the realm of defense.

A substantial reduction in defense production at the major industrial centers of the Russian Federation must be provided for when pursuing conversion, as it is there that the problem of increasing the production of consumer goods is the most acute and where the broadest possibilities exist for the development of business ties.

The output of high-quality goods for national-economic purposes should also be increased through the adoption of new technologies and raw and other materials that were used for military products before, and based on the institution of a new system of credit and taxation. An important role in the fulfillment of that task is relegated to the sector institutes of the defense industry.

The realization of the proposed measures to resolve defense issues should create the essential conditions for the transition of the army onto a professional basis and its equipping with the most contemporary armaments.

The Presidium of the Supreme Soviet of the Russian Federation, for the purpose of strengthening parliamentary monitoring of the resolution of defense issues, considers it to be essential to provide for the legislative approval of state programs for military organizational development and the conversion of the defense industry along with the approval of the structure and size of the armed forces at the same time as the republic budget of the Russian Federation, as well as the monitoring of cadre policies in the military sphere.

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Russian Resolution on Defense Export Controls

*92UM1369B Moscow ROSSIYSKIYE VESTI
in Russian 30 Jul 92 p 4*

[Decree of the Russian Federation Government of 5 July 1992, No 469, Moscow, on Approving the List of Individual Types of Raw Products, Materials, Equipment, Technology and Scientific-Technical Information Employed in Developing Weapons and Military Equipment, the Exports of Which Are Controlled and Carried Out Under License in 1992-1993]

[Text] The Russian Federation Government hereby decrees:

1. To approve the proposed list of individual types of raw products, materials, equipment, technology and scientific-technical information employed in developing weapons and military equipment, the export of which is controlled and carried out under licenses in 1992-1993.

Only one-time licenses are to be issued for the exporting of raw products, materials, equipment, technology and scientific-technical information included on the designated list.

2. To establish that the principals in business activity on the territory of the Russian Federation, regardless of the forms of ownership, in the concluding of the contracts (agreements, treaties) for the export of goods (work, services) included on the list in accord with Point 1 of the current decree without fail should give heed to the obligations of the importer that these goods (work, services) will not be used directly or indirectly in the aim of producing weapons and military equipment as well as be re-exported or turned over to anyone whosoever without the written permission for this from the exporter who has approval from the Russian Federation Export Control Commission Under the Russian Federation Government.

Obligations relating to guarantees should be specially drawn up by the importer at the state body of the importer country which is in charge of foreign economic activities for each specific transaction for the exporting

of goods (work, services) included on the list, if such obligations are not stipulated by the Russian Federation international treaties.

A copy of the document providing the appropriate importer guarantees should be attached to the exporter's request for the granting of a license.

The Russian Federation Ministry of Foreign Economic Affairs is to issue licenses for the exporting of goods (work, services) included on the list only with the corresponding ruling from the Russian Federation Export Control Commission Under the Russian Federation Government.

[Signed] Ye. Gaydar.

Russian Federation Defense Export Control List
92UM1369C Moscow ROSSIYSKIYE VESTI
in Russian 30 Jul 92 p 5

[List of Individual Types of Raw Products, Materials, Equipment, Technology and Scientific-Technical Information Employed in Development of Weapons and Military Equipment, the Export of Which is Controlled and Carried Out Under Licenses in 1992-1993; approved by the Decree of the Russian Federation Government of 5 July 1992, No 469]

[Text]

List of Individual Types of Raw Products, Materials, Equipment, Technology and Scientific-Technical Information Employed in Developing Weapons and Military Equipment, the Export of Which Is Controlled and Carried Out by Licenses in 1992-1993

Part I. Raw Products and Materials	
	TN VED Code
Section 1. Nonferrous Metals	
Titanium alloys (including granulated and secondary) with an ultimate strength of over 120 kg/sq mm and creep strength of over 15 kg/sq mm at a temperature of 600° C.	8108
Wrought magnesium alloys (including granulated) with an ultimate strength of over 35 kg/sq mm.	8104
Cast magnesium alloys with an ultimate strength of over 28 kg/sq mm at an operating temperature of over 250° C.	8104
Aluminum-lithium alloys (including those containing scandium) with a lithium content of over 6% and over 3% for scandium	760120;
	760421-
	760429;
	760612;
	760692;
	761090
Systems of aluminum-magnesium-lithium (scandium) possessing in the aggregate the following characteristics	760120;
density of less than 2.47 g/cu cm;	760421-
modulus of elasticity of over 7,800 kg/sq mm;	760429;
specific strength of over 19 km	760612;
	760692;
	761090

Part I. Raw Products and Materials (Continued)

	TN VED Code
Systems of aluminum-copper-magnesium-lithium (scandium) possessing in the aggregate the following characteristics:	760120;
density of less than 2.56 g/cu cm;	760421-
modulus of elasticity of over 8,000 kg/sq mm	760429;
specific strength over 19 km	760612;
	760692;
	761090
Systems of aluminum-copper-lithium (scandium) possessing in the aggregate the following characteristics:	760120;
density of less than 2.6 g/cu cm;	760421-
modulus of elasticity of over 8,000 kg/sq mm	760429;
specific strength over 22 km	760612;
	760692;
	761090
Systems of aluminum-lithium (scandium) possessing in the aggregate the following characteristics:	760120;
density less than 2.4 g/cu cm;	760421-
modulus of elasticity over 8,000 kg/sq mm;	760429;
specific strength over 20 km	760612;
	760692;
	761090
Cast superalloys with equiaxial, directed and monocrystalline structures possessing the ultimate strengths:	750220;
over 42 kg/sq mm at a temperature of 900° C. for 100 hours:	7218;
over 23 kg/sq mm at a temperature of 1,000° C. for 100 hours;	7224;
over 12 kg/sq mm at a temperature of 1,100° C. for 100 hours;	810510100
Nickel-based alloys	750220;
Iron-based alloys	7218;
	7224
Cobalt-based alloys	810510100
Section 2. Structural and Composite Materials	
Three-dimensional-reinforced carbon-carbon materials of the type KIMF (GRANIT, RUMB, RAZRYAD, ZVEZDA) with increased erosion resistance characterized by a mass loss rate of less than 3 mm/s at a temperature to 3,500° C. and over and a pressure up to 150 atm and over	3801
Volume-reinforced carbon-carbon materials of the ZARYA type with increased erosion resistance characterized by the mass loss rate of less than 0.05 mm/s at temperature of up to 3,500° C. and over and a pressure to 150 atm and over	3801
Fabric woven carbon-carbon materials of the ISTOK type with increased erosion resistance at a temperature to 3,500° C. and over and a pressure to 150 atm and over	3801
Section 3. Inorganic chemical products	
Boron, crystalline and amorphous with a basic substance content of at least 99.5%	280450100
Section 4. Polymers, plastics, chemical fibers and filaments, rubbers and articles from them	
SG salt (hexamethylenediamineadipate)	291713000
Polyamide-12	390810000
Polyamides, except:	391190900
resins of the grades PAIS, BFDI, BPI;	
varnishes of the grades AD-9103, AD-9103PS, AD-9103IS;	

Part I. Raw Products and Materials (Continued)

	TN VED Code
binder of the grade SP-97	
Polybenzimidazols and materials based on them	391190900
Aromatic polybenzothiasols and materials based on them	391190900
Aromatic polyoxadiazols and materials based on them with a heat resistance over 300° C.	391190900
Aromatic polychinoxalines and materials based on them	391190900
Aryloxes with heat resistance over 300° C.	390720900
Polyparaxylilen	390720110
Rubbers, fluorsiloxane, operating at temperatures from below -60° C. to over +200° C.	390469000
	4002
Sealing compounds based on liquid thiokol operating at a temperature below -60° C. and over +150° C.	4002
Organic silicon sealing compounds operating at temperatures below -60° C. to above +250° C.	4002
Dianhydride of diphenyloxide tetracarboxylic acid	291720000
Carbon materials from polyacrylonitril fibers with aggregate characteristics	550130000;
tensile strength of over 350 kg/sq mm:	551521900
modulus of elasticity of over 35,000 kg/sq mm	
Organic fibers of the SVM type	540239900
Compound fiber and filaments ARIMID	540239900
Thread-like crystals and continuous fibers of silicon carbide	284920000
Thread-like crystals and continuous fibers of aluminum oxide	281820000
Section 5. Pharmaceuticals	
Preparations of the cholinesterase group for determining organic phosphorus toxins	382200000
Section 6. Raw products, materials, semifinished products for producing electronic equipment articles	
Coal (germanium-containing) of the grade B-brown:	270210000
Sakhalin coal from the Novikov section	
Chikhez coal from the Pavlov section	
Aluminum oxide of the grades GI, GKIS, GLMK	260600000
Polycrystalline silicon according to GOST [State Standard] 26550-85	280461000
Silicon, monocrystalline, alloyed and unalloyed in ingots and sheets	381800100
	(only monosilicon);
	381800900
	(only monosilicon)
Epitaxial structures of silicon on sapphire (KNS) for KMOP of integrated circuits	381800100
Gallium arsenide, monocrystalline, in ingots and sheets with a diameter of over 78 mm	381800900
Epitaxial structures of the A3V5 compounds	381800900
except structures under YeTO.035.026TU;	
YeTO.035.161TU; YeTO.035.281TU;	
YeTO.035.294TU; YeTO.035.372TU;	
YeTO.032.512TU; YaYeO.032.016TU;	
YaYeO.032.076TU; YaYeO.032.81TU;	
YeYeO.032.91TU; YaYeO.032.108TU;	
YaYeO.032.115TU; YaYeO.032.123TU;	
YaYeO.032.129TU; YaYeO.032.136TU	

Part I. Raw Products and Materials (Continued)

	TN VED Code
Monocrystals and sheets of triple compounds of cadmium-mercury-tellurium (KRT) except monocrystals with a diameter to 30 mm and sheets with a diameter to 10x15 mm	381800900
Powders, ferrite manganese-zinc	811100110
Rock crystal, first grade	710310000

Part II. Technology and Scientific-Technical Information

Section 1. Metallurgy

The technology for obtaining titanium alloys (including granulated and secondary) with an ultimate strength over 120 kg/sq mm and a creep strength over 15 kg/sq cm at a temperature of 600° C.

The technology for obtaining wrought magnesium alloys (including granulated) with a yield strength of over 35 kg/sq mm.

The technology for obtaining cast magnesium alloys with an ultimate strength over 28 kg/sq mm at a working temperature of over 250° C.

Technology for obtaining aluminum-lithium alloys (including those containing scandium) with a lithium content over 6% and for scandium over 3%:

- systems of aluminum-magnesium-lithium (scandium) which in the aggregate possess the following characteristics: density less than 2.47 g/cu cm; modulus of elasticity over 7,800 kg/sq mm; specific strength of over 19 km;
- systems of aluminum-copper-magnesium-lithium (scandium) which in the aggregate possess the following characteristics: density of less than 2.56 g/cu cm; modulus of elasticity over 8,000 kg/sq mm; specific strength of over 19 km;
- systems of aluminum-copper-lithium (scandium) possessing in the aggregate the following characteristics: density less than 2.6 g/cu cm; modulus of elasticity over 8,000 kg/sq mm; specific strength over 22 km;
- systems of aluminum-lithium (scandium) which in the aggregate possess the following characteristics: density less than 2.4 g/cu cm; modulus of elasticity over 800 kg/sq mm; specific strength over 20 km.

Section 2. Structural and composite materials

The technology for obtaining three-dimensional reinforced carbon-carbon materials of the type KIMF (GRANIT, RUMB, RAZRYAD, ZVEZDA) with increased erosion resistance and characterized by a mass loss rate of less than 3 mm/s at a temperature up to 3,500° C. and over and a pressure up to 150 atm and over.

The technology for obtaining volume-reinforced carbon-carbon materials of the ZARYA type with increased

erosion resistance and characterized by a mass loss rate of less than 0.05 mm/s at a temperature to 3,500° C. and over and a pressure up to 150 atm and over.

The technology for obtaining fabric woven carbon-carbon materials of the ISTOK type with increased erosion resistance at a temperature to 3,500° C. and over and a pressure to 150 atm and above.

The technology for obtaining heat-resistant carbon materials for a working temperature over 1,750° C. with an ultimate strength of over 30 kg/sq mm (for use in carbon-carbon materials) and over 20 kg/sq mm (for use in carbon-ceramic materials).

The technology for obtaining thermoinsulating, thermostable (tens of thousands of hours in a temperature range to 750° C.), ecologically pure materials of the KG-3 type on the basis of graphite with a density of 0.2 g/cu cm and a heat conductivity coefficient of 0.1 watt/m*K.

Section 3. Polymers, plastics, chemical fibers and filaments, rubbers and article from them.

The technology for obtaining aromatic polyamide materials with a heat resistance over 450° C.

The technology for obtaining organic polymer photodetectors for space-time light modulators.

The technology for obtaining aromatic polychinoxalines and materials based on them.

The technology for obtaining diparaxylen (D-2 monomer) and polyparaxylen (PPK).

The technology for obtaining fluorosiloxane rubbers operating at temperatures below -60° C. and over +200° C.

Section 4. Pharmaceuticals

The technology for producing polyanatoxins.

The technology for producing attenuated, concentrated and purified vaccine for preventing Venezuelan encephalomyelitis on the basis of the original SM-27 strain.

The technology for producing attenuated, cultured and purified divaccine for preventing Eastern and Western equine encephalomyelitis.

The technology for producing preparations of the cholinesterase group for identifying organic phosphorus toxins and information on the use of the preparations.

The technology for obtaining and employing the immunoglobulins of polygroup luminescing rickettsioses making is possible to give an indication of the rickettsiae of the type of typhus, tick-borne spotted fever and Q-rickettsiosis in immunofluorescent analysis.

The diagnosticum, technology for obtaining and using the cultured, polyvalent diagnosticum of hemorrhagic fever with renal syndrome for an indirect method of immunofluorescence.

Hybrid technology for obtaining the immunodiagnosticum of a monoclonal luminescant for the virus of tick-borne encephalitis and information on the use of the diagnosticum.

Section 5. Toxic substances

Information on the synthesis and evaluation of the physicochemical toxicological characteristics of the neurotoxicants of particularly high toxicity with an average lethal dose of less than 0.1 mg/kg in the aim of discovering highly effective neurotoxicants.

Section 6. Radioelectronics

The technology for manufacturing and applying radio-absorbing coverings of the FP-1 and FP-3 types with a reflectivity of less than 15% at a temperature to 350° C.

The technology for obtaining multilayered structures of cadmium-mercury-tellurium (KRT) with the use of vacuum synthesis.

Information on the methods of optimizing the processes of combining covered local layers and tonology of high-precision integrated circuits (not worse than 0.2 micron).

Information on the design and operating principles of the ion-beam scanning lithographic units for producing elements with submicronic dimensions (to 0.1 micron).

Section 7. Pickups, metering equipment and instruments

Information on the results of developing standard sets of equipment for fast and high-speed filming with photoreceiving modules based on instruments with charge coupling and modules with operational information processing and used in studying high-speed processes

Information on the development of gyroscopic devices based on new physical principles with a potentially achievable amount of drift of not more than 0.01 arc degree per hour:

- dynamically tuned gyroscopes;
- gyroscopes on magnetic and electrostatic suspensions;
- laser gyroscopes;
- gyroscopes employing cryogenic systems;
- solid state gyroscopes on the basis of the effect of the propagation of a standing wave in quartz;

—gyroscopes on a gas dynamic base.

Section 8. Power equipment

Information on the design, manufacturing methods, materials, basic assemblies and systems of on-board nuclear power units and making it possible to have the direct reproduction or aid the accelerated realization of such designs;

Information on the design and manufacturing ideas making it possible to develop short-pulse electron and proton accelerators with an energy over 8 Mev and a pulse current over 1 kA.

Section 9. Electronic equipment

Information on the results of research and development of high-temperature superconductors with a critical magnetic field over 150 Tl and a critical current over 1,000 MA/sq m at a temperature of 77 K for equipment for the magnetic acceleration of objects.

Information on the design and manufacturing ideas in the area of developing pulse electric power sources on the basis of forming lines with a power exceeding a level of 100 Twt at an energy exceeding 5 MJ.

Information on the design and manufacturing ideas in the area of developing pulse electric power sources based on induction memories with an energy content over 100 MJ and an access time of less than 10 ms.

Information on the design and manufacturing ideas in the area of developing pulse electric power sources based on homopolar generators designed for the slow take-off of capacity (over 1 s) with an energy content over 100 MJ and the fast take-off of capacity (less than 1 ms) with an energy content of 1 MJ.

Controversy Over Fate Of Military Space Units

Space Units Press Officer Dissents

924P0167A Moscow DEN in Russian
No 30, 1 Aug 92 p 3

[Article by Lt Col Igor G. Makhalov, officer in the CIS Joint Armed Forces Space Units Press Service: "Out of Orbit..."]

[Text] The incipient process of organizing a Russian Army presupposes first of all the formulating of the state's military doctrine and the elaboration on the basis of this of an overall concept of the Armed Forces. In the words of the Minister of Defense G. Grachev, the former should be submitted to the Russian Federation by 1 July, and the latter by September of the current year. As a whole, the reform of the Russian Army is to be concluded in 6-8 years. For comparison, let us point out that the Special Commission set up at the end of the 1960s by the U.S. President took only 5 years to work out a general plan of military reform and in accord with this, for example, a service, such as the ground forces, was

improved qualitatively for a period of another 13 years. And this was all on the basis of a highly developed economy, with American efficiency and organization. Certainly in establishing the Russian Armed Forces, in the words of the same G. Grachev, "changes are required in literally all spheres, beginning with military doctrine and ending with the required qualities of a soldier." And this is under the conditions of an impoverished Russia.

The implementation of the Russian military reform presupposes the solution to a triune task: a quantitative cutback in the Armed Forces, their structural transformation and their qualitative improvement. How does all of this appear in terms of space facilities?

The space units of the former USSR were assigned to launch and support the functioning in orbit of spacecraft for scientific, national economic and military purposes, the interplanetary automatic stations, the manned spacecraft and orbital stations. They possessed cosmodromes in Baykonur and Plesetsk with the corresponding subunits for testing and preparing the space equipment for launch, the Main Command and Control Center as well as the auxiliary subunits. From the specific purpose of the space units—the simultaneous carrying out of military and national economic tasks—one can see their special role in the structure of the Armed Forces in contrast to the other combat arms which are organizations that are purely military. Another particular feature of this combat arm is that the space units in peacetime live according to the laws and standards of a combat situation. This specific feature of theirs requires a special approach in examining the prospects for the development of the space units.

Here the question arises first of all: where are they needed? The problem is that the space facilities, in being an element of the unified space complex of the former USSR, were located over all its territory. With the collapse of the Union, certain republics, in taking an unique approach to the desire to confirm their sovereignty, hurried to declare their right to the facilities of the space units located there following the principle "whether we need it or not, take it."

In actuality, one cannot help but understand the leadership of Kazakhstan in "privatizing" Baykonur, which was on its land, as the republic simply did not have enough either economic or intellectual potential even for maintaining this unique cosmodrome, let alone to operate it.

The Ukrainian authorities should realize that the inclusion in the system of its air defense of the Command and Control Centers (KIK) in Crimea, in being subunits of the space units, will not substantially increase its combat readiness, but the efficient use of the space facilities here will be sharply restricted. If Ukraine intends to carry out an "independent" space policy, it would scarcely be beneficial for it to have absolute separation from the space capabilities of Russia. But even worse here they follow the adage "I can't use it but I won't give it to

anyone else." In either instance, one feels like using the political saw of modern times: "Political ambitions are getting the uppermost over common sense."

Since an agreement between the former USSR republics on joint activities in the sphere of space more and more often are suspended in mid-air, one can speak of the established trend for the collapse of all our cosmonautics, which still continues to hold leading positions among the space powers. It is not even a matter of national prestige, for at present, as they say, "these are lean times...." But in order to survive, we cannot allow ourselves to be deprived of the system developed over the decades for the participation of the space units in the country's national security.

Experts have established and practice has confirmed that "military space" increases the effective operations of the Armed Forces by 1.5-2-fold. The successful Desert Storm operation was largely the result of highly effective support for the combat operations of American troops from space. For this reason the U.S. continues to increase allocations for the military space programs. In the strategy of U.S. national security it is pointed out that "both sea and space routes can be concealed and can be employed chiefly as a springboard for attack."

The First Deputy Minister of Defense A. Kokoshin, in speaking about the nation's military doctrine, in contrast to the Americans, emphasizes in every possible way that this will not be based upon the existence of a potential enemy or opponent. Having noted here that, contrary to formal logic, an incorrect premise would lead to a correct conclusion, we will not halt for critically examining from the military-political viewpoint the obvious inconsistency of the initial thesis, but rather let us agree with the correctness of the final assertion by the vice minister that the Russian Armed Forces should be the "guarantor for security in the instance of any unforeseen events and deter any aggression."

Hence, the necessity of a sharp rise in the role of space facilities in the military organization of the Russian state. Under the new conditions of "a defense for all azimuths"—and this is precisely how one might define the meaning of the new military doctrine—in the forefront, in the words of the Chief of the Space Union Col Gen V. Ivanov, emerges a highly operational detection of the early indications for preparing to commence military operations, the prompt warning of a missile attack and providing the troops with dependable global communications and combat control and command.

In the first place, one of the crucial aspects of the military reform is the organizing of the rapid deployment and response forces. Secondly, as a result of the Russo-American Agreement on Reducing Strategic Offensive Weapons, a large portion of the U.S. nuclear potential remains on aircraft and submarines, where the Americans have an advantage over us in quantity and mobility. Thirdly, the "Charter of Russo-American Partnership and Friendship" proposes to the CSCE member

states in the aims of strengthening the mechanisms for the prevention, surveillance and settling of conflicts and the opportunities for supporting peace in Europe, that the Armed Forces and the resources for their joint employment be allocated. The question is also being examined of creating UN Joint Armed Forces under the aegis of the Security Council.

One could mention a number of other factors which have brought about new approaches to assessing "military space," however the listed ones are enough to realize that the interests of Russia's national defense, European security and universal peace urgently demand not only the maintaining of our space facilities, but even their strengthening and development. Life urgently poses the question of creating the unified military-space forces of Russia on the basis of the Directorate of the Chief of Space Facilities and the space formations, field forces and units subordinate to him.

In accord with the new defense strategy, the Russian Army to an ever-greater degree will consist of professionals and in quantitative terms will be reduced by 50 percent. In professional terms, the officers operating the complex space equipment are on a level of the strictest modern requirements. The picture is less happy in terms of the manning of the space units with personnel.

Even now, the establishments of the subunits have been drawn up without considering the details, leaves and sickness. As a result at certain KIK, for example, the composition of the duty shifts operating costly spacecraft in flight is just one-half of what it should be. Only the greatest professionalism and responsibility by the personnel of the command and control centers, their correct understanding of the difficulties which the entire nation is experiencing, can explain the virtual absence of unsuccessful sessions for controlling the spacecraft. What reduction at all can be considered here? Certainly the patience of the personnel is not infinite. Such a state of affairs as well as the absence of clear legal status for the Russian servicemen carrying out their duties outside its territory have already led to the expression of dissatisfaction by the Baykonur officers. There must be a strict legal basis for using both jointly and unilaterally the space facilities located in neighboring states of Russia.

If one understands professionalism as the high skills of a specialist and his conscientious attitude to his job, then it must be admitted that the personnel in regular service with each new draft less and less conforms to these demands. Things have reached such a point that the pilots at Baykonur are afraid of carrying out missions on aircraft which are serviced by mechanics in regular service. The aviators at the cosmodrome several years ago concluded that the high-quality execution of the given missions could be carried out only by a fully manned establishment of warrant officers ["praporshchik"]. Incidentally, the freed soldiers could strengthen the personnel at the security facilities of space equipment. However, this initiative to work in a new manner did not gain its proper response from the superior levels.

One other thing. If we speak about the organizing of a Russian Army on a qualitatively new level, then we must not, having reduced the army in quantitative terms, hope on some magical rise in its combat readiness and a transition to a new qualitative state without any additional allocations. This is elementary common sense which on the given question was demonstrated by the Speaker of the Russian Supreme Soviet R. Khasbulatov, who has repeatedly declared that "a cheap army is a bad army."

From this viewpoint, the space units which define qualitatively a new level of national defense clearly cannot be reorganized without any cost any more than can the other components of the new Russian Army. Almost one-half of the facilities for the command and control of military-purpose spacecraft are located on the territory of CIS countries adjacent to Russia. In converting to command and control of these spacecraft solely from Russian territory, the efficient execution of the missions of communications, intelligence and navigation is reduced by 1.5-2-fold. For recovering the status quo within the Russian Federation it would be essential to set up another several KIK. Let us add to what has been said that, as any sea power cannot not have ports for the basing of its fleet, so Russia should have its own cosmodrome. With the transition of Baykonur to the jurisdiction of Kazakhstan, the Plesetsk Range will become such a space harbor. Thus, the reorganizing of the Plesetsk Cosmodrome as the State Cosmodrome of Russia, along with the further development and improving of the infrastructure for the space facilities, requires definite expenditures.

Someone, in speaking about the national economic importance of cosmonautics, compared this with a chicken which lays golden eggs, having noted, in this case correctly, that we have still not learned to use this with advantage for ourselves. We, of course, can save in feeding it, but will we gain from this in any other more substantial way?

We greatly want to believe that the planners of the military reform and the legislators approving it know the correct answer to this question.

Makhalov, Radionov to be Fired

924P0167B Moscow DEN in Russian
No 32, 15 Aug 92 p 1

[Unattributed article: "Fit for Service but Unfit..."]

[Text] Our newspaper (DEN, No 30) published an article by the Officer from the Press Service of the Space Units, Lt Col I.G. Makhalov "Out of Orbit," where the author proves the necessity of strengthening the space facilities in the course of the pending military reform, as an important element in the system of Russia's defense capability. Subsequent events were to show that the Russian Ministry of Defense not only closely reads our newspaper but responds quickly to its articles.

As we were to learn from reliable sources, the Directorate of the Chief of Space Facilities received a telephone call from the superior military leadership expressing dissatisfaction over the "tone of the given article and its publication in the newspaper DEN" and also demanding "a talk with the author." Just how such analyses end is well known not only to the men in epaulets but also civilians. However, reality surpassed even the gloomiest forecasts characteristic for the recent era of stagnation.

In carrying out instructions from superior levels, the Chief of Space Facilities, Col Gen V.L. Ivanov, ordered the dismissal from the Armed Forces of not only the author of the mentioned article but also the leader of the Press Service, Col A.I. Radionov, for "not preventing the publication of the material" and also announced its decision to completely eliminate the press group, having said that it "does not see a place for this subunit in the new structures of the military space forces."

In a telephone conversation with our correspondent, both disgraced officers confirmed the fact of their forthcoming dismissal, but here, remaining loyal to the officer's honor, refused to comment on the actions of their command. Bravo, Mr. Generals! I congratulate you on your next victory of "democracy" over free speech.

Russian Control of CIS Nuclear Arms Urged

924P0172A Moscow NEZAVISIMAYA GAZETA
in Russian 15 Aug 92 p 2

[Article by Petr Korotkevich, academician and deputy chairman of Russian government chairman's board of experts: "We Need a New Global Strategy, But Few Members of the Governing 'Team' Realize This"]

[Text]

Geopolitics

Russia still has no comprehensive theory of national security and no defense policy doctrine, just as it has no programs and plans for arms production with a view to the new geopolitical situation. There has been no further work on the plans to secure the necessary conditions for the reasonable sufficiency of defense efforts, maintain the combat training of troops on the necessary level, and administer all branches of the armed forces with consideration for the need to reduce and modernize them.

The situation in the world, however, has changed radically in recent years. East-West confrontation has become part of history, and the words themselves have lost their earlier meaning. There is no longer a Soviet Union, a "socialist community," and a Warsaw Pact. Russia's relations with the United States of America and other NATO countries are acquiring the features of a partnership. Some of the former union republics of the former USSR, on the other hand, are effectively at war with each other (the former SFRY has suffered the same fate).

When we try to predict the international situation at the turn of the millennium, we can assume that third-world countries will be increasingly persistent in their efforts to acquire nuclear missiles and that this prospect is looking more and more realistic. According to my calculations, from 20 to 24 of the countries now categorized as developing states could have these weapons by the year 2000. This means that the danger of a large-scale nuclear conflict, provoked by some irresponsible regime south of our borders and of NATO's present sphere of interests, will increase dramatically.

In view of this, it seems advisable to begin analyzing the prospects for the creation of an integrated and unified system of strategic defense, which would be based on the strategic deterrence forces of Russia, the United States, and all of the United States' NATO allies. Only this kind of united effort can deter aggression and prevent the start of a third world war. I am personally willing to serve this cause, devoting all of my knowledge and experience to it, and I will cooperate with anyone interested in saving world peace.

The issues of geopolitics and nuclear safety are among the most complex problems facing the leadership of our country today. Military and political officials in Russia and the other countries that combined to make up the Commonwealth of Independent States after the collapse of the USSR are debating problems connected with the command and control of all branches of the armed forces. A special place among these topics is occupied by the command and control of the strategic missile forces, which, in my opinion, cannot and should not be turned over to the control of the CIS, which is not a state, but a commonwealth of several states.

We must proceed from the fact that the whole battle-management structure of our strategic defense, or the strategic deterrence forces, on the vertical and horizontal planes is located in Russia and is based on a single set of principles and mechanisms. Any deviation from these principles and these mechanisms would be counterproductive. For this reason, we are disturbed by the maneuvers over the nuclear missiles located within the former Soviet territory outside Russia and by the fact that our CIS partners are in no hurry to sign the Treaty on the Non-Proliferation of Nuclear Weapons.

Yes, strategic objects may be launched without outside assistance, there are secondary and tertiary backup procedures, and there is the possibility of multiple launches, but there is a special controlling sequence of algorithms. No one can ever disconnect a warhead, change the data in an aircraft computer, or enter "his own" target designations. As long as the whole command and control complex is located in Russia and does not go anywhere else, the yearnings of those who crave Russian nuclear weapons are absolutely futile.

The command and control of missile complexes is not, however, the main issue in the guarantee of nuclear safety within the territory of the former USSR. The main

thing is the organization of guaranteed oversight of the operation of battle systems and high-risk installations. This applies, of course, to all types of systems: land (ground or rail), sea-, air-, and space-based.

In addition, 85 percent of the defense industry potential of the CIS is concentrated in Russia. It supplied—and is supplying—all of the defense industry enterprises in the former union republics with all of the necessary components. Virtually all of the science, the whole materials technology base, and the whole testing and experimental base are concentrated in Russia. It was our country, and not some other CIS state, that developed and distributed new models and new generations of military hardware.

In view of this, we must admit that only Russia can—as long as the necessary conditions are established—guarantee the kind of manufacturer's services that are carried out not by the armed forces units operating the equipment, but by enterprises in the defense branches of industry or the military-industrial complex.

Meanwhile, we are witnessing the collapse of the administrative and production structures of the managerial staff that arranged for manufacturer's services in the past and should continue to do this in the future, providing for guaranteed oversight of the use of strategic nuclear arms. A normative and technical base was established and perfected, the appropriate documentation was prepared, teams of experts were formed to take charge of these services, and practical experience was accumulated in the USSR for decades. Today, however, we have to admit that we are rapidly losing our experts and that standard servicing procedures are being ignored. If this process is not stopped as soon as possible, by tomorrow we may not have anyone to guarantee the proper oversight.

In this connection, I want to stress that Russia's chief asset today is not its rich supply of natural resources, and it is not even the defense industry potential that put us on an equal footing with the United States of America. Our greatest asset is the country's scientific potential—a result of the work and effort of many generations. Today we are disastrously close to losing it.

I believe strongly that the reforms following the revision of laws should begin in culture, education, the arts, and public health. This work should be done on truly nationwide scales, and the completion of this work, as well as the comprehensive national security system, should be guaranteed by the president. Unfortunately, virtually no funds are being allocated for reform in education and the other spheres listed above. The reason is the notorious remainder principle of financing. People here somehow managed to tarnish the reputation of the professor, who was once put on a pedestal. The state always protected teachers and scientists, who gave us knowledge, set the trends in social development, and served as the generators of progress. Now a driver is paid four, five, or even ten times as much as the educator of future engineers, physicians, economists, and politicians. The result is the increasing number of undereducated individuals with

degrees from our universities and institutes who make their way into all of the links of industrial, economic, administrative, civil, and military management. Might this not be the source of a threat to our security?

It is fascinating to watch discussions of strategic issues. The discussions are led by individuals who are frequently absolutely incompetent and have no professional knowledge, practical experience, or personal authority. Their statements, the terminology they use, and their general view of problems testify that the solutions they propose are based on misinformation and misconceptions.

In general, the situation in our country is incomprehensible and paradoxical. The people elected a man of integrity and honor to serve as our president. I have the deepest respect for him, and I believe that the chief executive of the state should be able to rely on the qualified assistance of all of his closest advisers. The present situation, however, is quite different. The voters who supported Boris Yeltsin and the president himself are "burdened" by an administration which is unable (or unwilling) to enlist the services of genuine professionals and to make use of their expert opinions in the elaboration of a clear and precise development strategy. This administration is not expressing the interests of our country and its inhabitants, and is making no attempt to control ongoing processes (when it does try to take control of them, it is easily thrown off course). People are beginning to believe that some members of the governing "team" are pursuing their own personal goals, and that these have no relationship to what the Russians really need.

We can only hope that the situation will be corrected in the not too distant future. Then a new global strategy will finally be elaborated in accordance with the interests of the Russian State, and will allow us to become an integral part of the civilized world.

From the NEZAVISIMAYA GAZETA Files

Academician Petr Korotkevich is one of Russia's leading experts on the strategy of military security and defense. He was the first to propose and substantiate the idea of developing a new generation of nuclear strategic arms with countermeasures against the casualty-producing elements of the probable adversary's ballistic missile defense system, and to set forth the fundamental precepts of a new unified strategic defense system.

He was referring to a new defense-policy doctrine, allowing for qualitative changes in the appearance and structure of the army and its new equipment.

Army reform based on the proposed doctrine would reduce the numerical strength and funding requirements of the army, but the most important result would be the avoidance of the irrational expenditure of material-technical and intellectual resources, which would guarantee the

stability of the country's whole financial and economic system for many decades at a time of continuous economic and political reform.

Academician Korotkevich is now the deputy chairman of the Board of Experts of the chairman of the Government of Russia.

CIS: GROUND TROOPS

Development of Troop Command and Control Systems. Part 4. The View of A Soviet Expert

92UM1343D Moscow VOYENNY VESTNIK
in Russian No 10, Oct 91 pp 47-49

[Article by Lieutenant Colonel Yu. Ryabov, under the rubric: "The Military Profession Yesterday, Today, and Tomorrow": "Development of Troop Command and Control Systems. Part 4. The View of A Soviet Expert"]

[Text] Right now information technologies have become one of the main criteria of the civilized nature of states and the modernity of their armies. With regard to armed forces they are acquiring special significance because an intense struggle for more effective information support is being waged in the sphere of command and control systems. The struggle is bloodless at first glance, primarily in the spheres of equipping troops with technical command and control and communications systems and improving organizational structures and personnel training of command and control posts. In fact, judging by the Persian Gulf conflict, lagging behind in the sphere of command and control in modern war is fraught with great losses.

The most complicated and responsible form of work of tactical element commanders and staffs is their creative and organizational activities. Meanwhile based on exercise experience, no more than 35-40 percent of the time remains for it. Under traditional methods of leadership, the remaining time is spent collecting, accumulating and summarizing data on the situation. Fifteen to twenty percent of budgeted time is spent processing documents. Just as much time is spent searching for informational materials, their duplication, movement and the organization of storage.

Therefore, the contradiction between the drastically increasing volume of information and the reduction of time to process it continues to worsen. By way of illustration, there are up to 80 primary sources of information in the structure of a defensive tank division. Research indicates that the volume of messages being received during the time a decision is being made reaches 20,000 words (150-180 pages of printed text). During the course of an engagement—90,000 words (more than 700 pages) per day. To this we need to add the internal exchange of information between command and control post components, that is, another nearly 12,000 words. The commander, during the period when a decision is being made, processes information that,

arbitrarily expressed, is an average of 16-98 pages of text (proceeding from the time expended). Everything depends on the level of his training, his personal qualities, and also the teamwork and coordination of the staff, and the skill to single out the most vital portion of the enormous mass of information. Other data also exist that confirm that the capabilities of command and control systems to process these volumes of information is 2-4 times lower than required.

The first results of the utilization of field automated command and control systems (PASUV) in the Soviet Army permitted us to discover a large number of their advantages. The command and control system emerged as the actual solution to the crisis situation. Experience was accumulated and the directions of future improvements of field automated command and control systems were studied during the course of several years in division-sized and smaller units and during the training of academy students.

Unfortunately, the organizations which need to have an objective assessment of the effectiveness of the "Manevr" System (the so-called PASUV) based on official duties have not displayed an interest in the opinion of the officers who are involved with its operations. The questions which combined arms experts have repeatedly posed to the developers have essentially remained unanswered. Therefore we should not talk about an established system for gathering statistical material or about regular surveys of commanders and staff officers, if only in the course of headquarters and combined arms exercises.

Just what shortcomings prevent "Manevr" from successfully operating as a genuinely automated command and control system?

First of all, experience indicates that the types of combat documents developed for use in PASUV have turned out to be divorced from the practice of the troops. Significantly greater amounts of time are spent processing them than was initially assumed due to various conventions (omissions, punctuation marks, formats, etc.). Furthermore, ordinary documents cannot be utilized because there are no optical character readers in PASUV. Obviously, the new system must contain documents that have a combination of the mandatory elements of permanent and changing information that are disseminated in a prescribed form (questionnaire or tabular) and the capability to describe targets and their specifications in a form that is suitable for automated processing in PASUV.

Research attests to the feasibility of a single formalization of combat documents. For example, just due to that, one can increase PASUV's functioning time by a factor of 1.5 until its discovery by enemy signals intelligence. In so doing, the increase of the stability factor can total 1.25 but it can total 3.15 when transmitting only variable information and utilizing fourth generation radio systems. The results of experimental use of some samples of

formatted combat documents indicate: the volume of transmitted information can be reduced by a factor of 1.7 without reducing clarity and when transmitting only variable information through communications channels—by a factor of 2.2.

Second, the capabilities of PASUV's computer system and its information and mathematical software clearly lag behind personal computers, all the more so when connected in a network. For example, right now the computer system solves only one calculation task and is based on obsolete data (TTKh [technical specifications] of vehicles and weapons and others) and has not been adapted to the new arbitrary tactical symbols or to changes in the approved organizational structure, etc. The lag behind similar foreign command and control systems has thus been programmed.

The troops have an urgent need for tasks that support calculations on completing marches, overcoming minefields, crossing water barriers, planning comprehensive effective engagement, and modeling the rates and depth of the advance of troops on the offense. Accounting-planning tasks for maintaining troops at combat readiness or for conducting mobilization and combat teamwork and coordination and other tasks are no less important. Convenient PEVM [personal computer] programs have been developed at the USSR Ministry of Defense NII [Scientific Research Institute], at academies and at military schools. However, they cannot be used in the existing PASUV.

Besides everything else, the computer system is not very reliable during operation. And that not only reduces the effectiveness of command and control but also discredits the very idea of automation in the eyes of commanders. The device's clearly too high functional capabilities and normative data that were set forth in the literature in contrast to their practical realization under field conditions cause skepticism among officers.

Third, the algorithms of combat operations and the duties of officials at automated work stations (ARM) need finishing touches and refinement. They are primarily intended for professional military men who, of course, are computer literate but who are not narrow electronic computer specialists. Many of the algorithms are difficult to master and have awkward instructions.

Fourth, the problem of combining the advantages of the conversational (direct interaction with the computer and a satisfactory reaction time) and batch modes (lock-out utilization of computer resources and relatively cheap mathematical software) has not been resolved in PASUV. Personal computers have these qualities. And running several types of conversation is certainly desirable. For example, "menu"; "questions that require a YES/NO answer"; "pattern"; "simple query"; "command"; "interaction in a natural language", and others. Obviously, programming specialists will assert that their widespread utilization will increase the system's flexibility and reduce its operational complexity.

We can increase the effectiveness of the conversation mode by changing the formalized command set panel (PNFK) with another device. The problem is being resolved based on new tactical element frequency words and word combinations and also of the structure of word search algorithms and of reading expressions and recording them in coded messages. The technological foundations already exist to do that. So, optical reading devices that permit recognition of even written text are being increasingly widely utilized in the USSR and abroad. Built-in speech recognition and speech synthesizing boards for computers have been developed. If we dwell on the rationalization of the existing version, we must reserve key words when a word of a programming language corresponds to a certain functional key. We need to stipulate the programming mode of the functional keys which support the review and change of their designations. It is appropriate to express the desire on the introduction of the latest achievements of software utilities: formalized dumping, a text editor, a synthetic parser or a calculator.

So, in principle "Manevr" can become the foundation for building a more flexible and efficient command and control system, mainly due to the development of its base of local personal computer networks and their integration with the PASUV elements that have recommended themselves well. To do this, first of all we need to immediately begin to develop new programs that provide increased efficiency and quality of information processing. For example, the formation of textual combat documents by transferring the tactical situation from a map using a "mouse"-type device. Computer graphics programs are required to organize the coordination of troops on electronic plotting boards (instead of terrain mock-ups). It is advisable to utilize these same plotting boards for monitoring the course of an engagement.

The need has long since passed to develop a subsystem in PASUV to locate our own troops based on the new ground navigation device. All information (including intelligence information) must enter and circulate in PASUV in a single system of coordinates. This alone will permit automation of information gathering on our own troops by 70 percent and will substantially increase command and control efficiency.

Right now "Manevr's" drafting-graphics device (ChGA), that is called upon to provide a single reference for coordinates, is one of the "bottle necks" that restrains PASUV's information capabilities. The absence of facsimile communications devices deprives commanders and staffs of the capabilities to efficiently disseminate text and graphics documents. This device would permit elimination of the problem of the efficient exchange of unformatted data between technical element headquarters and also "alleviate" to some degree PASUV's inherent psychological impact of limiting the commander's personal interaction with his subordinates.

It would seem that PASUV's capacity also largely depends on "minor" issues. For example, the lack of adequately compact portable control panels (terminals) "ties" officers to the KShM [command and staff vehicle]. Significant complications arise when a command and staff vehicle is being readjusted to transfer command and control to other vehicles. Combat arm commander's automation systems are being inadequately reserved. Finally, the low level of ergonomics and protection of personnel and an entire series of other problems hardly promote system effectiveness.

The cited arguments attest that "Manevr" cannot satisfy troop requirements in its present form. Although right now there is no alternative to the principle of automation itself. The system developers deserve kind words for a progressive step on that path. But it is intolerable to stop at what has been achieved and not see that the tactical element command and control system is in a state of crisis.

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How Do You Select a Position?

92UM1343C Moscow VOYENNNY VESTNIK
in Russian No 10, Oct 91 pp 40-46

[Article by Colonel A. Platonov and Colonel A. Shevchuk: "How Do You Select a Position?"]

[Text] Stability of the defense is attained by skillfully structuring the combat formation and through skillful utilization of favorable terrain conditions. Any terrain can be well fortified but expenditures of time, effort and material resources will be different in each individual case. The results of many field training exercises indicate that not all officers know how to correctly assess terrain decisions while making decisions on defense, especially during the selection of the forward edge. So, it makes sense to talk a bit about this in more detail.

Just what should we consider when we assess terrain? First of all, we need to discover the existing natural obstacles in front of the forward edge: rivers, swampy flood plains, steep heights, ravines, forests, and so forth. Sectors which can be flooded easily, having constructed the appropriate structures or, on the contrary, having destroyed existing structures, merit special attention.

Then, you need to study the terrain from the point of view of a good view and line of fire, the range of which should reach 2-2.5 kilometers as a minimum, which will permit you to totally realize the capabilities of the weaponry that is conducting direct fire. That is, preference is given to hills that permit surveillance of the enemy to a great depth and to destroy him from all types of weapons.

Trenches on the slope of a hill that are directed toward the enemy provide the best surveillance and field of fire to the position. And when locating them at the foot of a

hill, flatness of fire is achieved and, as a result, targets are destroyed along the entire extent of a bullet's flight.

Commanders who attempt to climb to the highest point of the hill and who falsely equate a good view with the best firing conditions most frequently permit mistakes during the selection of the forward edge. However, on any hill, people and weaponry will noticeably stand out from the background of the sky. Moreover, it is impossible to observe and fire at the entire slope from the topographical crest because "dead spaces" are inevitably created. And that is to the enemy's advantage: there is the possibility for surprise attacks. The elevation of hills also serve as good orientation points for him for registration fire.

Therefore, it would be more correct to take space somewhat below the topographical crest of the slope for the optimal trait of the forward edge along the slope, which we usually call the false crest. We recommend selecting it as follows.

You need to climb to the summit and then slowly descend from the topographical crest to the foot of the hill, while bending over in such a way that your eyes are on the height of the breastwork of the proposed emplacement (trench). The location from which the slope is visible to the foot (under the condition of minimum "dead space") will provide the first of the sought after points. To determine the subsequent points, you have to do the same thing several times.

The several points that have been found will also determine the location of the first trench. However, you don't always manage to locate all subsequent trenches along the false crests of hills. Here you need to keep in mind that they, especially the second and third, can also be built on the reverse slopes of hills at a distance of no less than 200-300 meters from the summit (see Fig. 1). In so doing, camouflage conditions and protection from aimed fire are improved, although the range of view and the field of fire are restricted.

It is better to locate the communication trenches along clearly expressed terrain lines and its background borders, to the side away from well-noticeable terrain features. You should not direct them along slopes because it is difficult to conduct fire from there and they themselves are easily seen by the enemy.

Indeed, you should not put a communications trench anywhere other than along the slope when selecting defensive positions on slopes of great length along the front (Fig. 2.). But in this case, it must be separated by short fronts of up to 10 meters and it is desirable for a camouflage or protective covering to be provided over them.

When determining the location for digging trenches and communications trenches at a position, you need to strive so that they do not all converge at one point, that is, vary the locations where they abut by 40-50 meters so that one communication trench is not simultaneously disrupted in two direction by one projectile.

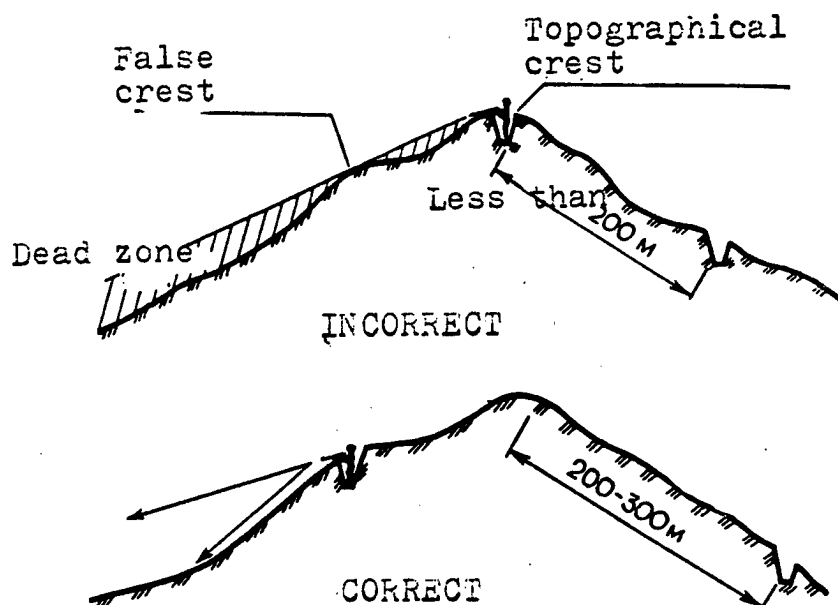


Figure 1. Location of trenches on hill slopes.

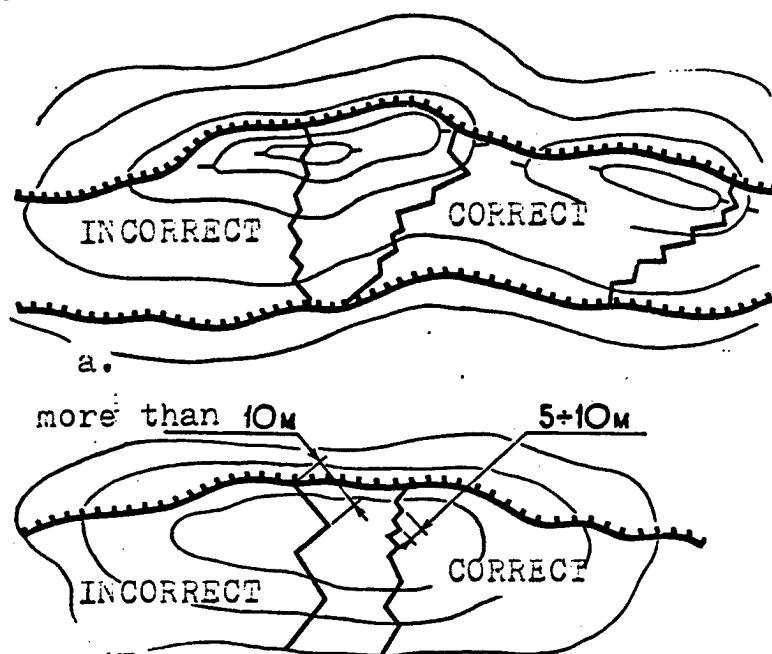


Figure 2. Location of communication trenches:
a. on small hills; b. on hills
of great length along the front.

Populated areas play an important role in defensive positions. The experience of the Great Patriotic War and subsequent local wars on various points of the planet attest to the fact that it is they (especially in the presence

of stone and concrete buildings with basements) that provide many advantages to the defenders. In them, you can simply and comparatively rapidly construct open type weapons emplacement, dugouts and shelters, and

also places for the location of rear service areas. In the process, the organization of camouflage and the supply of water and relaxation of subunits is simplified.

If we talk about the inadequacies of utilizing populated areas in defense, they are the probability that fires and barriers will arise. You need to attempt to prevent them from occurring and to take all possible precautionary measures.

Just how do you select the forward edge in the area of a small city or village? It would be more correct if you locate it 2-3 kilometers ahead or within the populated area because it is easier for the enemy to fire at structures on the outskirts. You can move the line of the forward edge ahead when natural obstacles run along the outskirts and the structures are durable, which permit them to be rapidly adapted for conducting fire. Otherwise, it is advisable to locate it within the city or village and to knock down the part of the structures that interfere with the field of fire.

When defending the leading edge in a forest, as a rule, they designate wood lines ahead at a distance of 100-150 meters or withdraw 50-100 meters into the depth of the

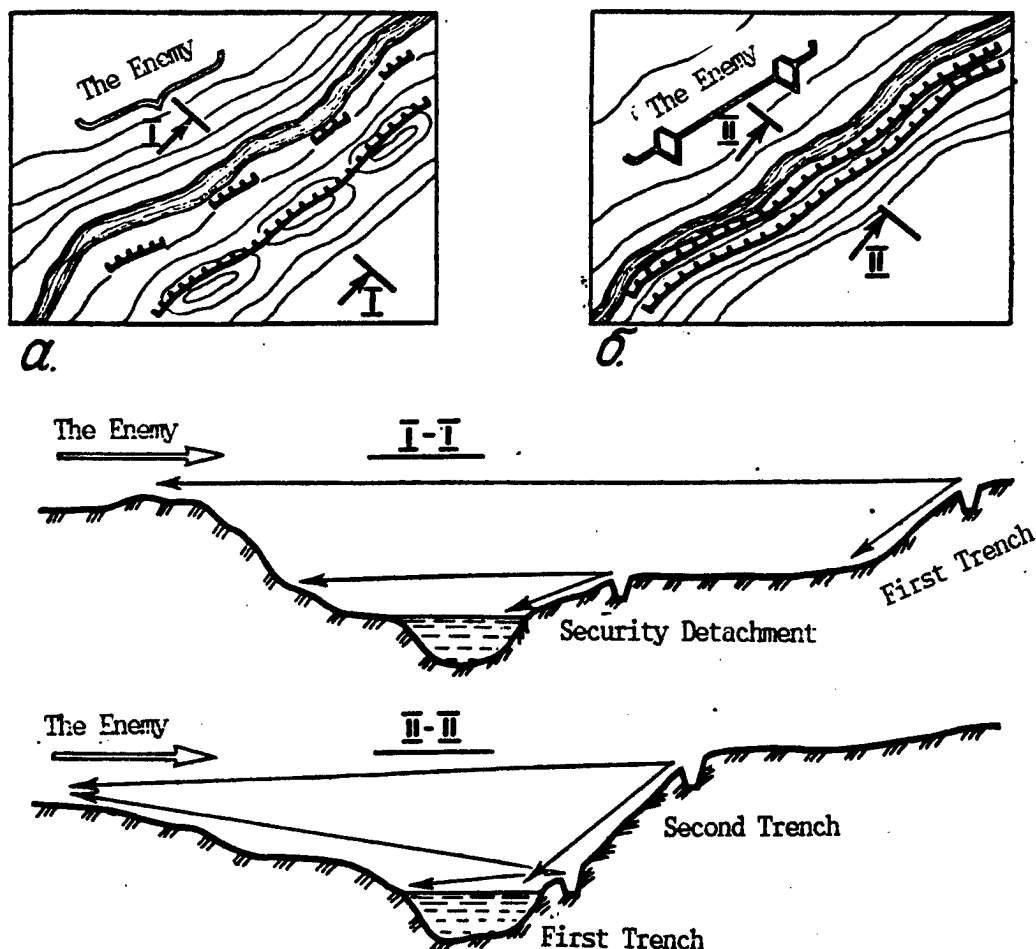
forest in order to impede the conduct of enemy artillery fire and to preclude destruction of the defenders by ricocheting shell fragments.

They carry out thinning out of trees and cut down a cleared path in the forest, remove small brush in field of fire sectors and cut down the lower branches of trees that interfere with firing for a view of approaches to the forest. Select locations from which there is the capability to conduct primarily flanking fire and crossfire along cleared paths in the forest, clearings, roads and along low forest to prepare positions for tanks, BMP's [armored personnel vehicles], PTUR's [anti-tank guided missiles], and mortars.

On wooded, swampy terrain, they normally select the forward edge of the defense behind a swamp in order to utilize the natural barrier, and if it is large, in the swamp itself. They utilize any relatively dry locations for defensive positions in swamps.

The location of the forward edge during the defense of water barriers will depend on the relief of the coastal area and its vegetation (see Fig. 3). So, when there are steep river banks and open terrain that are identical in contour,

Figure 3. Location of the forward edge near a water obstacle: a.—with a wide flood plain; b.—with steep banks.



it is designated as close as possible to the water's edge. They locate weaponry in such a way that they can fire on the access to the river, the smooth surface of the water, especially fords and sectors that are suitable for crossing using flanking fire and crossfires.

If a small water barrier has a broad open valley and the bank that is occupied by the enemy predominates over the opposite bank, it is advisable to construct only a combat security position near the water's edge. It is better to move the primary positions back to a favorable line from which you can observe and fire at the opposing side. You also need to do that if steps are provided for to flood the flood plain adjacent to the water barrier.

The second no less important stage is the direct building of fortifications. And here many commanders also do not always properly utilize the features of the slopes of hills. For example, forward slopes create a good view and permit you to more effectively conduct frontal fire in a wide sector. However, at the same time the enemy also sees the weaponry and fortifications very well and has the opportunity to quickly destroy them. Therefore, if you locate some fortifications or other on the forward slope, you need to use a large portion of them to conduct flanking fire (Fig. 4). And you need to orient emplacements for tanks, BMP's, and other combat vehicles, firing emplacements and positions not along the slope but across it in order to hide them from enemy direct observation and fire using a side breastwork.

A suitable place for a frontal fire weapon emplacement is the forward slope in the depth of the position when enemy

surveillance has been impeded. In this case, the opportunity will appear to create a multilayered crossfire and to introduce weaponry that are located in the depth and that have a large range of effective fire into the engagement for the forward edge.

From the reverse slopes, it is more difficult to observe the enemy and to destroy him while he is advancing and deploying. At the same time, a target that is located on the reverse slope is very well protected and hidden which supports the conduct of surprise flanking fire both in front of the front and also in the depth against an enemy that has broken through (Fig. 5). Therefore, you need first of all to locate weaponry and defenses that noticeably extend over the surface of the earth (BTR's [armored transport vehicles], tanks, reinforced concrete and wooden-earthen fortifications, and others) on the reverse slopes of hills.

Based on its advantages and shortcomings, a lateral slope occupies an intermediate position between the forward and reverse slopes. A view in a wide sector is opened up from it (Fig. 6). Therefore, here it is advisable to dig fortifications both for surveillance and for weaponry with a circular sector of fire: emplacements for tanks, BMP's, antitank weapons, and fortifications with rotating armored protection.

In the majority of cases, difficulties do not arise for commanders during the selection of locations for shelters.

Figure 4. A flanking fire emplacement on a forward slope.

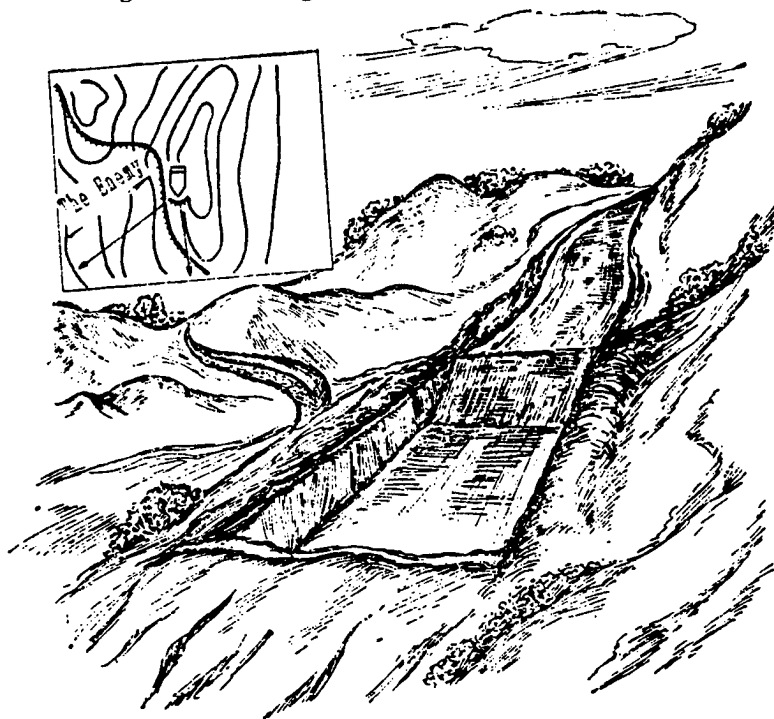


Figure 5. An emplacement on a reverse slope.

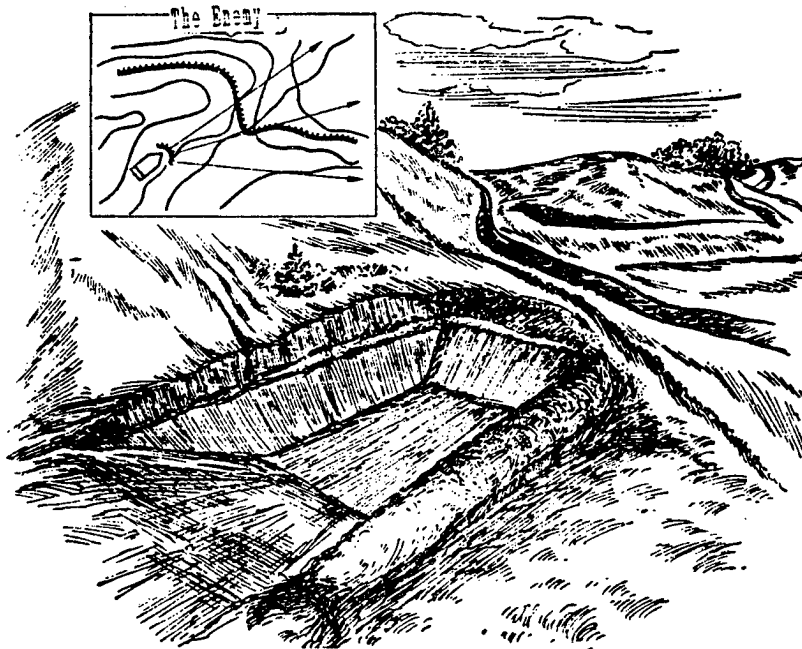
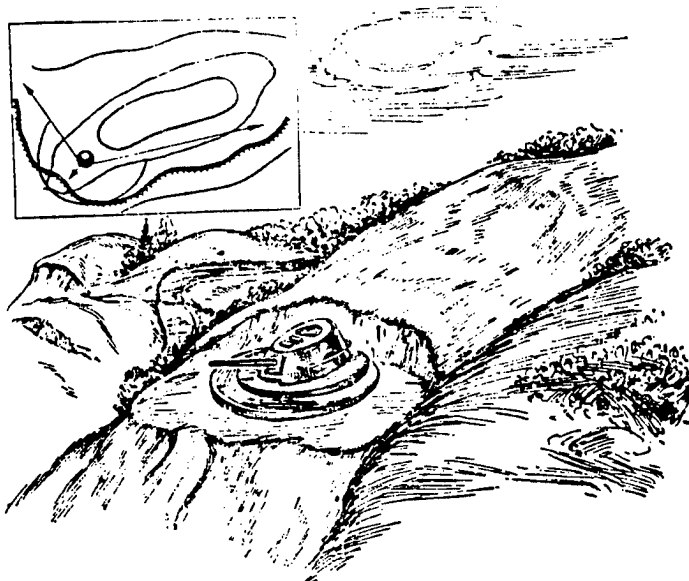


Figure 6. Weapon emplacement on a lateral slope.



Reverse hillsides, ravines, open pits, prepared underground structures, embankments, etc., are most frequently designated for them. However, attention is not always paid to the nature of the terrain and the axis of possible enemy attacks during the selection of shelters for vehicles and materiel.

When preparing shelters on reserve hill slopes, in man-made open pits, and depressions, you need to locate

them along the plane of the incline if it is less than 30° (1:2) and make the breastwork with lateral sides (Fig. 7). When the inclines of a slope are steeper, you should dig the shelter across it with a portion of the breastwork with paved bottom and sides (Fig. 8). When this rule is observed, the protective features are enhanced and the amount of earth work decreases.

Figure 7. Emplacement on a reverse slope with an incline of up to 30 degrees.

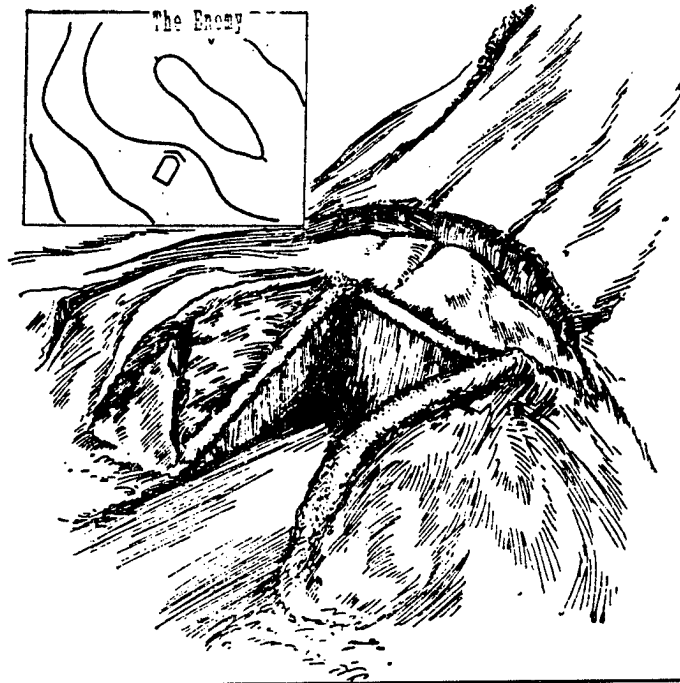
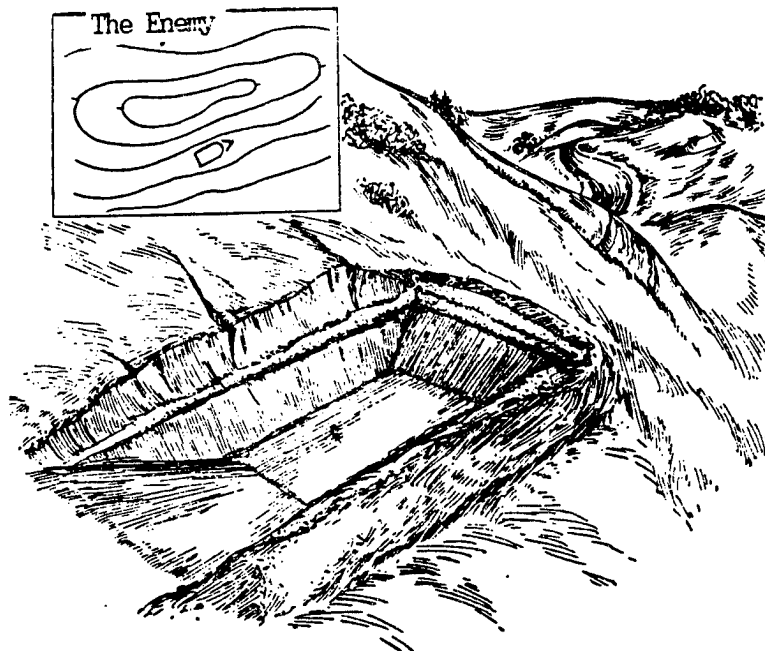


Figure 8. Emplacement on a reverse slope with an incline of more than 30 degrees.



If a group of shelters is being erected, then you need to orient them with the ramps to various sides since the axis of the anticipated enemy attack is not known. If they are located near a target which may serve as a registration

point for conducting strikes (for example, a hub of transmitting radio stations, a rocket battery position, etc.), their ramps must be directed to the side opposite the target. Furthermore, you need to move shelters for

vehicles and materiel beyond the limits of the fortifications, platoons and companies, and weapons and missile battery launch positions which may serve as targets for conducting nuclear, artillery, and air strikes.

You must adhere to that same rule when selecting sites for subunit shelters. However, this practically always causes difficulty because it comes into contradiction with another rule—with the need for personnel to approach weapons positions.

The combination of the simplest small fortifications for duty riflemen and crews (covered slit trenches, offsets, and small dugouts) with the trenches facilitates a solution to the contradiction. But you need to locate the shelters to protect the subunit's primary complement in the depth of the fortifications. You need to locate the former to the side away from the high-priority destruction targets (tanks, BMP's, machineguns, antitank guided missiles, and other targets that are important for the enemy), locating them on the forward sides of trenches and moving them out as close to the enemy as possible. For that same reason, you need to move the fire positions (fortifications for conducting closed-type fire) for the machineguns, mortars and other types of effective weapons out ahead of the trench, as a result of which their camouflage and protection is not only improved, but favorable conditions are also created to conduct flanking, multilayered and crossfire in front of the forward edge of the defense.

With inadequate experience, much time passes selecting the position. Therefore, all officers must continuously improve their skills in assessing terrain. In any situation (while riding in a vehicle, walking on foot at any field exercise or while working in the field), you need to teach yourself to consciously assess it and to make a conclusion: I should open an emplacement for a tank here, I should locate the command and observation post here, the first trench is over there, and I will set up the machinegun in the basement of the corner house.

On the other hand, to reduce time for assessing terrain and to make decisions more precise on the selection of positions and sites to set up fortifications, all work by commanders must be conducted in parallel. In our view, it would be more appropriate if the corresponding documents more specifically defined the tasks for each command level. For example, you should not require a battalion commander to determine the outline of the entire system of trenches and connecting trenches while he conducts preliminary reconnaissance, because this will take up much of his time. It will be sufficient for him to just define the borders of company fortifications, the locations of firing positions for organic and attached weapons, and also the outline of the forward edge on the axis of concentration of the battalion's main forces.

In the future, company commanders precisely define their leading edge and the borders of platoon fortifications and also the outline of trenches and connecting trenches within their borders. Platoon commanders

define on the terrain the outline of emplacements for the squad, carry out the digging of emplacements for BMP's (BTR's), and indicate the direction of connecting trenches to them and the command and observation post. Squad commanders determine the firing positions of machinegunners, the mortar man, and the locations of riflemen with the indication of sectors of fire, conduct the laying out of the fronts of the trenches and connecting trenches to the squad's position.

Under this procedure, each of them, responsible for his own sector of terrain, directly participates in its assessment and in the selection of weapons positions and deployment locations. The reduction of time for preliminary reconnaissance and for carrying out the assigned tasks and also the rapid involvement of personnel in work is thus attained.

In the second stage, already during the course of excavating positions, each senior commander, while working in the subunit, can more precisely define the decision made by the subordinate commander. While considering the lengthy periods of time to excavate positions, adjustments will not be too painful from the point of view of an additional amount of work. Moreover, in this case, an adequately high quality of selecting and excavating fortifications is ensured due to the exclusion of that haste with which the battalion commander has been compelled to personally determine the location of the leading edge and the outline of the system of trenches and connecting trenches.

We would like for other officers, especially commanders of combined arms subunits, to express themselves on this issue on the magazine's pages.

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Withdrawal From an Engagement Is not a Retreat
92UM1343B Moscow VOYENNY VESTNIK
in Russian No 10, Oct 91 pp 39-40

[Article by Guards Senior Lieutenant I. Nikolayev, Western Group of Forces: "Withdrawal From an Engagement Is not a Retreat"]

[Text] The primary steps to prepare for an engagement were completed toward evening in the defense area of the motorized rifle battalion commanded by Guards Major S. Kaptelin. They structured the defense with the calculation of impeding the enemy from acquiring the possibility to detect the combat formation and battalion fire plan. False defensive positions played a major role here.

They set up false positions and targets on the forward edge and in the depth of the area. The concept of operations of the impending engagement provided for conducting effective engagement of the attackers on the remote approaches and for compelling enemy subunits

to prematurely deploy. Other elements of the combat formation were prepared in front of the forward edge for that purpose.

From the small hill on which the leader of the exercise and his assistants were located, the skillfully camouflaged position of the motorized rifle platoon-sized fire ambush commanded by Guards Lieutenant E. Buka could hardly be seen in the thickening twilight. The guardsmen intended not only to inflict maximum losses on the enemy but also to take away its initiative using surprise close-range concentrated fire. Nearby an uneven line of defensive emplacements was visible in coordination with which the ambush was preparing to carry out its task.

The twinkling dots of lights of the targets' headlights suddenly cut through the darkness near the edge of the remote forest. The rumble of armored infantry vehicle artillery fire and the chatter of assault and machinegun bursts of the subunits involved in the ambush disrupted the quiet of the night. First of all, the defenders destroyed the enemy vehicles that were traveling at the head and tail of the column which forced the enemy to deploy. Lieutenant Buka reported to his senior commander about the course of the engagement.

When the motorized riflemen received the order to withdraw, they instantly fell back to the next line, practically without violating the combat line, and opened fire in concert from all barrels and a bit later the column departed for the left flank of the defense area at high speed and occupied their defensive position.

We must admit that the bright glow of burning tracers that attest to the high density of fire and the symmetry of the combat formations while completing the maneuver made an impression on me. But the senior commander did not share my ecstasy on that score. "That's for the greatest effect," he calmly noted. "In an actual engagement, that 'number' won't make it. After several short minutes of confusion, the enemy will unleash such a hail of fire on those soldiers in the ambush that they will not be able to perform those maneuvers that are suitable only for a parade."

Actually, the success of an ambush, besides everything else, is achieved by observing stealthiness during an advance to a designated area and during withdrawal through the use of deceptive, unexpected actions. As follows from Colonel V. Orlyanskiy's article "O voyennoy khitrosti" [On Military Stratagem] (VOYENNOY VESTNIK, 1991, No 6), we need to add elements of disinformation, imitative deception, and feints to these actions to force false impressions about the engagement's concept of operations on the enemy. That is, we also cannot get by here without a stratagem. To ignore it in a combat situation means to bear unnecessary losses.

It is honorable to die in battle. But a commander's gallantry doesn't consist of that. To carry out the task with the least possible losses is the essence of the art of

command. In this case, the situation required painstaking organization and support of the platoon's disengagement from the enemy force. And maneuvers that are designed to only, as they say, throw dirt in your eyes or to make an impression, are hardly useful. The very logic of this engagement prompted the fact that a rapid withdrawal was necessary before the enemy came to his senses, at the moment when his fire had slackened and under cover of aerosols. And not in a parade formation but in leaps—from concealment to concealment, utilizing terrain folds, while covering each other with fire, and while consistently occupying favorable positions for defense.

Alas, both the ambush and the security elements attempted to disengage from the enemy force with "pretiness" and while maintaining a straight line. They thereby presented an opportunity to the attackers to come down "onto the shoulders" of the withdrawing forces at the forward edge of the defense. But essentially such a disengagement from the enemy force placed the fulfillment of the battalion mission under threat of disruption. But even if the motorized riflemen could have held the positions being defended, it would have been too costly for them: for example, they would have had to include both the ambush and the security elements in the losses.

This episode of the tactical exercise was recalled at a meeting with soldiers—Afghan vets who were visiting our group of forces while being outfitted for prostheses. Major K. Krasushkin described a similar case but only in an actual engagement.

On that day, a long wait in ambush was finally justified: a group of Dushmani ran into them. A furious engagement was unleashed. And here it became clear that the combat situation was clearly not in favor of the motorized riflemen. The rebels significantly outnumbered them in forces and gradually drove them back toward the river, having surrounded the subunit in a semicircle. Only one solution remained, to withdraw and cross the water barrier...

Major Krasushkin was laconic. The story was literally packed into several sentences:

"We rushed to the other side under fire. The armored personnel vehicles barely crawled down the steep, rocky bank. One vehicle was shot up. They had to tow it... Dushmani machinegun bursts continuously came down in torrents."

Emotion filtered through his calm tone: "The lads were being killed! And all because we had not thought through the procedure for disengaging from an enemy force and the withdrawal route... We moved in a straight line without the slightest stratagem. That is precisely why so many fell..."

Yes, certainly more than one of the world's armies can admit to a wholesale withdrawal. And our tactics provide for a disengagement from an enemy force and a gradual

withdrawal. Why is so little attention being devoted to these subunit activities during combat training days? I will not reveal a big secret if I say that these topics that are recommended by combat training programs are usually worked out casually, using a pattern, and as an inconsequential makeweight to the other sections of tactical training. While justifying simplification, some commanders cite safety regulations: they say, if you let exercise participants have their way and grant them more independence, they will do something harmful...

Concern about the safety of subordinates and maintenance of their health is quite understandable. But frequently that explanation remains only an empty phrase and a unique type of justification for lack of initiative. But meanwhile individual commanders are becoming accustomed to stereotypes in tactics and are not developing skills for the utilization of techniques for surprise operations. And the habit of disengaging from an enemy force in a parade formation will certainly result in additional losses in an actual combat situation.

Right now when we are orienting ourselves in combat training primarily to defensive tactics, the significance of those themes, such as a withdrawal and disengagement from an enemy force, has increased immeasurably. We need to learn how to inflict destruction on the "enemy", exhaust him, paralyze his will, and disrupt an organized attack using small forces with minimal losses. To do this, we need to know how to value time and if an engagement unfolds unfavorably—to rapidly withdraw to previously prepared lines in order to fundamentally reinforce ourselves there and to give the enemy the proper rebuff.

The trouble is that commanders at exercises are encountering quite a few problems during the organization of a disengagement from an enemy force and withdrawal. The fact is that there is very little literature or methods guides on these topics. At times, you are left depending only on officers who fought in Afghanistan. The experience of war has confirmed that a theoretically well-trained commander is capable of using his knowledge in practice only when he also has the persistence, stubbornness, and aspiration to deceive the enemy in any situation, including in a crisis situation.

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Distinctive Features of Employing Tank Fire in Defense At Night

92UM1343A Moscow VOYENNNY VESTNIK
in Russian No 10, Oct 91 pp 34-36

[Article by Doctor of Technical Sciences, Professor, Colonel Yu. Pavlov and Lieutenant Colonel V. Milenny: "Distinctive Features of Employing Tank Fire in Defense At Night"]

[Text] The organization of an engagement at night is justifiably considered to be one of the most complicated procedures in the activities of commanders and staffs. The restrictions imposed on command and control of

subunit fire and maneuver under poor visibility are well known. However, modern methods and techniques of operations that permit the reduction of the negative impact of darkness on combat effectiveness have still not received widespread application in the troops. Despite the requirements of guiding documents to conduct one third of exercises at night, the return from them frequently does not correspond to the efforts being expended.

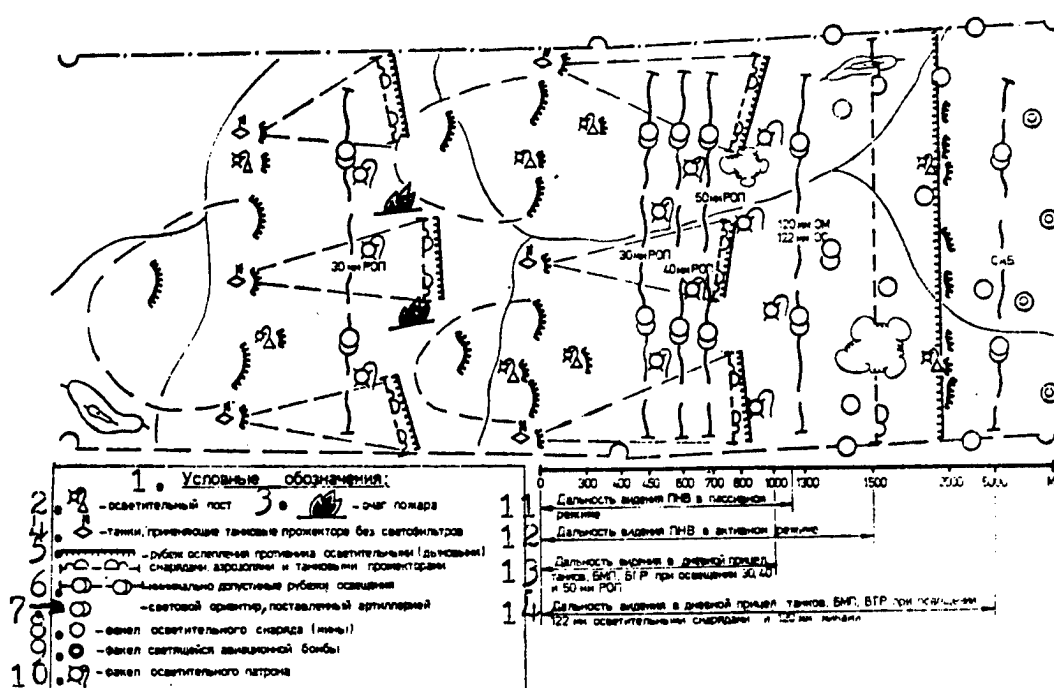
Therefore, we would like to dwell on promising techniques for organizing the fire plan, specifically of tanks, in the defense at night. In principle they can be reduced to several basic directions: increase the range of effective engagement of the enemy, improve the organization of lighting support, and effectively utilize new sighting and surveillance instruments and munitions.

As we all know, sighting and fire adjustment conditions deteriorate at night (especially for range). Drastic lighting changes, muzzle flashes and the dust and smoke clouds formed in that process, the burning of tracers, the detonations of shells, and fires reduce the effectiveness of tank fire. A number of distinctive features result from this for organizing a tank subunit fire plan in the defense. They concern the use of night vision devices (PNV), lighting and light signaling devices, floodlights and headlights (see the diagram).

It is no secret that the latest generation of foreign tanks which are equipped with imaging infrared sensors exceed native tanks in observation range at night and also in fog, rain, and during smoky conditions. It is entirely probable that in a night engagement with them our subunits will have to conduct fire at great ranges just using day sights and lighting devices. Lighting in the target area must be no less than 2-3 lux.

It is important that an illumination round (mortar round, aircraft bomb, rocket) flare be 150-200 meters beyond the targets and burn at an altitude of 450-500 meters. If the targets are located in the background of a forest (brush), it makes sense to create a smoke background that is illuminated from the back to improve visibility. This method will permit us to open fire with guided projectiles at the maximum launch range.

It is advisable to utilize short range illuminating devices in front of the forward edge of the defense which are capable of supporting aimed fire of tank machineguns and infantry small-arms fire. The range of 30, 40, and 50 mm pyrotechnic flare cartridges is 450-1,200 meters with an average illuminated area radius of 400-500 meters (with a level of 0.6 lux). So, illumination posts and subunits need to be deployed with an interval of up to two kilometers and somewhat ahead of tanks, at a range of 300-350 meters. We recommend use of the table during the selection of the lines for initiating and terminating illumination. Incidentally, let's recall: the level of illumination of our own combat formations should not exceed 0.2 lux, otherwise their positions will be revealed.



Key:

1. Legend:
2. Illumination post
3. Seat of fire
4. Tanks using tank searchlights without light filters
5. The line at which the enemy is blinded by illuminating (smoke) projectiles, aerosols and tank searchlights
6. Minimally permissible blinding line
7. Light reference point delivered by artillery
8. Illumination projectile (mortar round) flare
8. Aircraft bomb illuminating flare
10. Illuminating flare cartridge
11. Night vision device viewing range in the passive mode
12. Night vision device viewing range in the active mode
13. Tank, BMP [Armored Personnel Vehicle], or BTR [Armored Transport Vehicle] day sight vision range under illumination of 30, 40, or 50 mm pyrotechnic flare cartridges
14. Tank, BMP, or BTR day sight vision range under illumination of 122 mm illuminating projectiles or 120 mm mortar rounds

Primary Specifications of Illumination Devices

Designation	Duration of Illumination	Radius of Illumination of Terrain (in meters)		Range of Visibility of Major Targets in a Tank Day Sight (illumination level 2-3 lux)	Attainability	
		0.2 lux level	2-3 lux level		Min	Max
Parachute flares	up to 6 minutes	4,800	1,500	upto5,000meters	—	—
122 mm illuminating projectile	30 seconds	1,200	450	upto5,000meters	2,600	15,000
120 mm illuminating projectile	42 seconds	1,300	600	upto5,000meters	1,060	5,300
50 mm pyrotechnic flare cartridge	30 seconds	600	250	upto1,000meters	—	1,200

Primary Specifications of Illumination Devices (Continued)

Designation	Duration of Illumination	Radius of Illumination of Terrain (in meters)		Range of Visibility of Major Targets in a Tank Day Sight (illumination level 2-3 lux)	Attainability	
		0.2 lux level	2-3 lux level		Min	Max
40 mm pyrotechnic flare cartridge	25 seconds	500	250	upto 1,000meters	—	500
30 mm pyrotechnic flare cartridge	9 seconds	400	150	upto 700meters	—	450
L-2 Tank Searchlight	—	—	—	upto 1,200meters	—	1,200
OU-3 Tank Searchlight	—	—	—	upto 800meters	—	800

Depending on the type of night vision device, the gunner's eyes adapt 3-60 seconds after a round has been fired. A dust cloud "hangs" for just as long. And if the former deficiency is eliminated through the improvement of sights, the latter is eliminated through quite simple procedures: reinforcing the dirt with sod and branches and pouring water on it when possible.

An important problem is the determination of the correlation between night vision devices' active and passive modes of operation. On the one hand, in the active mode, sights' visibility range capabilities are realized to the maximum possible extent but, on the other hand, that operation reveals the location of the tank that is firing. It is the reverse in the passive mode—the range of vision is reduced, but camouflage procedures are observed. During the course of an engagement, you should utilize the latter for as long as possible. It is advisable to begin operating searchlights when the level of natural illumination is low, when the enemy has detected the defenders, or when target range corresponds to the range of effective fire.

In order to impede detection of subunits' main forces, we recommend turning on infrared light sources when possible only on the flanks and in the time (10-15 seconds) required to fire at the target. You should not conduct target reconnaissance in the active mode because operating searchlights are detected at maximum range in an imaging infrared sensor before you will have even caught sight of the enemy. When concentrating fire, they are turned on in one or two flanking tanks and the rest operate in the passive mode. Our tank crewmen frequently used this method during combat operations in the RA [Republic of Afghanistan].

For a number of reasons, an enemy at ranges of 2,000-1,500 meters can conduct a fire engagement practically beyond the threat of destruction. First of all, he has superiority in the latest models of night vision devices, especially imaging infrared sensors. It becomes overwhelming in poor weather. Secondly, tank subunits do not have their own devices for illuminating designated lines.

We see a solution in blinding the advancing troops using smokes and aerosols. The latter, according to Western assessments, reduce the effectiveness of imaging infrared

sensors by a factor of 3-10. In our view, we should not forget the experience of illuminating terrain and targets using tank searchlights with the light filters removed. As combat operations in the Republic of Afghanistan demonstrated, this method permitted us to conduct fire using day sights and furthermore improved visibility in night vision devices. Of course, you should not turn on searchlights for long periods of time and, when possible, you should subsequently change positions. The decisive condition of success is unity of command and control of lighting and fire. They designate "illuminating" tanks, primary and alternate positions for them, and paths of maneuver beforehand. They preclude our subunits from ending up in lighted areas. Finally, as a rule, they do not task "illuminating" tanks with missions.

In a number of cases, they plan areas for blinding the enemy at short ranges in front of the forward edge and in the depth. At night, part of the tanks occupy temporary firing positions at intermediate points between defensive positions on the flanks of defending subunits. Their task is to suddenly illuminate and blind two-three advancing enemy tanks. In the process, it is difficult for the enemy to determine the distance between the tank and the target due to the blinding effect, and infrared devices are partially or totally jammed using light jamming.

We must not forget the methods that were proven by the experience of the Great Patriotic War. For example, preparation of data for firing based on the azimuth indicator and side level. They conduct fire against muzzle flashes even without illuminating systems and night vision devices.

Summing up what has been said, we will attempt to set forth some recommendations for tank crewmen. At great distances, while considering enemy superiority in night vision devices, conduct fire using a day sight against targets that have been illuminated using the appropriate munitions of attached and supporting subunits. Allocate an adequate number of tanks for surveillance and reconnaissance in the active mode, without defining fire missions for them. Use smokes and aerosols to reduce the effectiveness of enemy night vision devices. At short distances, plan to blind advancing troops using tank searchlights without light filters. Equip firing positions in such a way as to reduce the formation of dust and

smoke clouds. Shift to firing using night vision devices at ranges of 1,400 meters from the cannon and 400-600 meters from the machinegun. Widely use concentrated fire with illumination of the target in the active mode by designated tanks. Conduct reconnaissance, survey and (when possible) registration of probable areas of concentration and the axes of enemy advance before dark.

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AGS-17 'Plamya' Grenade Launcher Performance

92UM1421C Moscow KRASNAYA ZVEZDA
in Russian 25 Aug 92 p 2

[Article by Aleksandr Dolgikh: "Against Infantry—With a Burst of Grenades"]

[Text] If anti-tank grenade launchers (bazookas, faustpatrone [German bazooka-type weapon]) were widely used in the concluding stage of the Second World War, anti-personnel grenade launchers appeared much later—at the beginning of the 1960's. They permit the destruction of enemy personnel and weaponry in the zone that

is inaccessible for certain types of weapons and noticeably increase the fire capabilities of motorized rifle subunits. All the more so automatic grenade launchers that are capable of firing both single grenades and in bursts.

One of them—the AGS-17 (heavy automatic grenade launcher)—has received the expressive name "Plamya" [Flame].

You can also conduct fire from the AGS-17A remotely. Therefore, not only motorized riflemen are equipped with it. The grenade launcher is mounted on tanks and other armored vehicles and on small surface craft and helicopters. Two types of projectiles—the VOG-17A and the VOG-17M—are used for firing. Both are loaded with fragmentation grenades with an instantaneous point detonating fuse. In contrast to the VOG-17A, the VOG-17M is also equipped with a self-destruct mechanism.

Reliability, effectiveness, recoilless operation, relatively low price, and simplicity of servicing—these are the distinguishing characteristics and properties of this weapon.

Primary Specifications of Grenade Launchers

	AGS-17	AGS-17A
Caliber, in millimeters	30	
Weight of round, in kilograms	0.35	
Weight of grenade, in kg	0.28	
Grenade muzzle velocity, in meters per second	185	
Firing range, in meters	1,700	
Firing rate, in rounds per minute	350-450	440-500
Rate of sustained fire while firing single rounds, in rounds per minute	50-100	
Maximum combat load of shells (rounds), each	200	300
Weight of grenade launcher, kg	18	20
Weight of stand, kg	12	
Crew, in men	2	

2S6M 'Tunguska' SP Air Defense System's Performance

92UM1430A Moscow KRASNAYA ZVEZDA in Russian
28 Aug 92 p 2

[Article by Colonel Vitaliy Moroz: "'Tunguska'—Air Defense Guardian of the Regiment"]

[Text] Specialists who are researching the problems of troop air defense—both foreign and ours—are unanimous in that air defense missiles in all of their variety and effectiveness are inadequate for covering the combat and march formations of units. Reliable defense of troops from an airborne enemy who is operating at low and medium altitudes is ensured only through the joint use of air defense missile complexes and air defense artillery. And there is one more undeniable conclusion: the best PVO [Air Defense] system on the battle field—is the self-propelled air defense system that has that same

mobility and off-road capability as the tank, armored personnel vehicle, and self-propelled ground artillery system. These principles have been reflected in the structure and tactics of PVO subunits and in equipment policy. In a number of armies (United States and France), they prefer to have mixed air defense subunits that are equipped with both missiles and barreled weapons. Parallel work is occurring on the improvement of air defense missile complexes and 20-40 mm air defense artillery. So, for example, the Roland air defense missile complex (developed in two versions jointly with the French) and the Gepard 35 mm twin self-propelled air defense gun were introduced into the inventory practically simultaneously in the Bundeswehr. Our designers selected a more difficult but also more promising path. They developed the 2S6M self-propelled air defense system, armed with air defense guided missiles and 30 mm automatic air defense guns. You can say that the features of Roland and Gepard were combined in

one combat vehicle. Indeed, quite a bit was added in the process. The self-propelled air defense system that received the name Tunguska is unique. The 2K22M air defense machinegun-missile system, that combines up to six such systems and is designed for air defense of motorized rifle or tank regiments, does not have any equals.

The 2K22M system's combat systems support detection, identification, and destruction of airborne targets, including hovering helicopters, in varied weather conditions and at any time of day. Firing from the automatic air defense guns can be conducted while stationary, on the move, or from short halts. Missiles can be launched while stationary or from short halts when the target is within line of sight range. The 9M311 missile, which is capable of destroying both fixed and targets flying at a speed of up to 500 miles per hour, is automatically brought to bear along the line of sight based on signals transmitted over a radio channel. The missile is 2,562 mm long, the fragmentation-continuous rod warhead weighs nine kilograms, and it reaches speeds of up to 900 miles per hour on its way to the target. Eight launchers for missile canisters and two twin 30 mm twin-barrel air defense automatic guns are mounted on each Tunguska air defense weapons system. The systems are equipped with radar and digital computer systems, an optical

gunsight with a guidance and stabilization system, navigation equipment, internal and external communications systems, etc.

The system can also be used to destroy ground and surface targets at a range of up to 2,000 meters. You can judge its effectiveness in this case based on the automatic air defense guns' total rate of fire—4,000-5,000 rounds per minute.

The system includes a transporter-loading vehicle on a KamAZ-43101 vehicle chassis that has been attached to each air defense complex. It transports eight missiles, 32 boxes of shells for the automatic guns, has a crane, loading equipment, and also loading and unloading cartridge belts, and radio communications equipment.

Furthermore, the complex includes several repair and maintenance vehicles (simulators are also mounted on them to train loaders and radar system operators) on a Ural-43203 chassis, a mobile automated monitoring and test station based on a GAZ- 66 motor vehicle and a shop that is mounted in the van of a ZIL-131 truck.

Tunguska, which has immediately attracted the attention of foreign specialists, is being manufactured in Ulyanovsk.

The Technical Specifications of the 2S6M Self-Propelled air defense System

Target detection range, in meters	18,000
Target tracking range, in meters	13,000
Destruction zone, in meters:	
For missile weapons	
—Altitude	15-3,500
—Range	2,500-8,000
For cannon weapons	
—Altitude	0-3,000
—Range	200-4,000
Combat load, each:	
—missiles	8
—30 mm shells	1,904
Combat effectiveness:	
—for missile weapons	0.65
—for cannon weapons	0.6
Weight of the loaded system, in kilograms	34,000
Crew, in men	4
Speed along a road, in kilometers per hour	65

CIS: AIR, AIR DEFENSE FORCES

76th Air Army Commander Interviewed

92UM1426A St. Petersburg
SANKT-PETERBURGSKIYE VEDOMOSTI
in Russian 14 Aug 92 p 5

[Interview with Lieutenant General of Aviation Boris Yurevich Nikiforov, Commander of the 76th Air Army, by SANKT PETERBURGSKIYE VEDOMOSTI correspondent I. Lisochkin; place and date not given: "Aviation Is a Russian Fondness"]

[Text] Next Sunday, not only flyers, but all people who are involved in aviation, its admirers, professionals, and amateurs will celebrate Air Force Day. Over the course of many years, newspapers on this day have published picture spreads and reports devoted to the work of military and civilian pilots. Now, we are trying (and we are getting the opportunity) to relate what we previously did not talk about. In this case, the discourse will be about the 76th Air Army, whose designation as well as the name of its commander, Lieutenant General of Aviation Boris Yurevich Nikiforov, have not yet appeared in the press. Today, our special correspondent I. Lisochkin interviews the commanding general of the 76th Air Army.

[Lisochkin] If it is possible, I would like to introduce the 76th Air Army and explain to the reader what it is.

[Nikiforov] Here, we cannot do without some history. If you will recall, in the years of the Great Patriotic War, the situation dictated the need to establish large military formations—from tank armies to engineer corps that were capable of rapid redeployment and the execution of major tasks. It goes without saying that this process also affected aviation. Our army was formed in November of 1942 in blockaded Leningrad, so in the near future we will celebrate our 50th anniversary. I would like to talk about this in more detail, but, as they say, I am forced to restrain myself, inasmuch as even a general visit through our museum can take many hours. I will note only that we remember our fathers and grandfathers who heroically defended the Leningrad skies, and we reverently observe the traditions that were paid for with their blood.

As is well known, in the postwar years military people went through many reforms, including the "Khrushchev" reforms. The Air Army at times was made a part of the okrug system, and at times it was taken out of it. Though contemporary military doctrine requires the presence of special, strike forces of various arms even to a greater degree than in the years of the last war. And at the present time, we constitute an independent military formation that coordinates closely with the Leningrad Military District and the PVO [Air Defense] large formation [obyedineniye], which has its own aviation. In the event of repelling aggression, our army is capable of

accomplishing important tasks in frontal and near-frontal zones. Its force composition includes bomber, fighter, and reconnaissance aviation, transport aircraft, and support helicopters.

In peacetime, moreover, we are responsible for flight safety in the air space of the LVO [Leningrad Military District]. There is a large number of aircraft in the air here every day, civil and military flights are conducted, and exercises take place. All schedules and tables are coordinated with the headquarters of our Army, there is no need to interfere here, only monitoring is performed. But any new operational flight (and the need for urgent air transport in the elimination of natural disasters arises rather frequently) requires the approval of the Air Army, and, moreover, we determine all flight conditions. I make so bold as to say that this responsibility is very great.

[Lisochkin] I know that the appointments of military commanders of your rank are followed abroad very closely. Reviews of the biographies of our generals immediately appear in military journals. But a reader in this country, as always, is not informed. Therefore, tell us briefly about yourself. Perhaps this will prove interesting to your subordinates also.

[Nikiforov] As for my subordinates, they know me very well. In the whole northwest, there is no garrison that I have not visited two or three times and more in the course of a year. In such cases, I go only by foot through entire installations. At meetings and receptions of the servicemen and members of their families, I answer all questions specifically.

However, I am really rarely asked about my biography.

All right. I was born in Gorkiy, and I grew up in Saratov. Father died in the war. Mama raised two children by herself. Since she worked, I had to get up very early by myself, starting at age six. I looked after my young sister. Apparently, this is where I got my first command habits and an ability to perform any kind of housework.

I completed the Saratov Special School of the Air Force [VVS]. Afterwards, I trained in the Pavlodar school on prop aircraft and in the Armavir school, on jet aircraft.

I served as a fighter pilot in the Baltics, in Germany, in Belarus, in the Transbaykal, in the Far East, and in Central Asia. Thus—38 years. If you look at the whole system of positions, from line fighter pilot and lieutenant to commander of an army, a lieutenant general, I did not miss one rung. I consider this very useful.

I was married once and forever, three grandchildren. At times, journalists ask about diversions. I will not hide it—fishing. And my wife is the most ardent and successful angler in our family. Of course, I only get to go fishing two or three times a year. The commanders of armies must always be in touch both with higher offices and with subordinates. That is their fate.

[Lisochkin] Do you continue to fly?

[Nikiforov] No. After I became commander, I understood that this would no longer be possible. And, not being taken off flight status for reasons of health, I myself imposed this restriction.

Recently, we had occasion to receive quite a few foreign delegations. I am acquainted with the commanders of the Air Forces of the United States, Germany, and India. I can sincerely envy my foreign colleagues. Each of them has only two concerns: personnel training and combat readiness. But under our conditions, the commander and his staff are responsible for everything: administrative practice, finance, construction, and concern for the officers' families. And the problems are very serious. For two months, for example, our pilots had not received their pay. Now the money has finally been received and paid out. An SU-27 regiment was withdrawn from Poland to Petrozavodsk. Apartments and a kindergarten are being built on the basis of shared participation. Despite full mutual understanding with local authorities, you understand, there are enough worries. Everything cannot be enumerated, and everything requires time.

There is also one more reason why I gave up flying. Under present conditions, it is better to give those 100 hours that I could fly in a year to younger pilots. That is better for the mission.

[Lisochkin] But the heart aches?

[Nikiforov] That is not the word... A person who is remote from aviation can never understand what flying means to a pilot. I remember last year, when I was returning home, my wife immediately guessed from the look on my face: "You flew?.." And, nevertheless, I had to give it up.

[Lisochkin] There is a lot of material in the press now about destructive processes in the army. To what extent does this affect aviation?

[Nikiforov] I would not like to overpraise my own profession, but still, I will say: A person who is in aviation by accident is a rare phenomenon. Here people serve and work who are dedicated to their job. That means a lot.

We went through a very difficult time. That anti-army campaign that raged for a long time in the mass media had its results. There were a lot of reports about discharges that had one motivation: There are no prospects in the service. There were requests for transfers to Ukraine and to Belarus. But all of this somehow has quieted down. Some understood that "you cannot escape fate," and others that no one was waiting for them in the "sovereign states." One can feel sorry for the good pilots whom we succeeded in losing. However, on the whole, we do not have any problems with officer personnel.

On the other hand, there are numerous other problems. In particular, in material-technical supplies. We are being severely hit by breakdowns in deliveries of gasoline

and kerosene. We have to fly one and a half to two times less than previously. There is also a shortage of nitrogen, oxygen, and much else.

As before, housing and consumer services problems are being resolved with great difficulty. Perhaps you will be surprised, but we do not have any military stores. They remained in the okrug system, which we left. Here, we are trying to do what we can by ourselves. I am a convinced supporter of unit farms. In this respect, I also do not stop agitating and issuing orders. We grow potatoes and vegetables, and we are building hotbeds on the training grounds. We are even engaged in fish breeding. We are already receiving supplements for the tables of flight and technical personnel and the families of servicemen, and we can broaden this significantly.

I also want to say a few words about a problem that might seem secondary to some. In connection with the shortfall in the current call-up, we are experiencing a shortage in the private ranks, which causes considerable difficulties. We do not have many compulsory service soldiers, but the deficiency here is more acute. There is also one more fact. Let no one take offense at this, but the replacements that we are receiving, as previously, are far from being trained physically and morally in the best way. Those who are performing service at their place of call-up maintain contacts with acquaintances in the civilian economy. From this you get absences without leave and even participation in crimes. It is surprising, but frequently we cannot find a common language with the parents of soldiers and receive help. Perhaps they will read my words and will think about it. After all, we have the same task: Raise real men out of young boys.

[Lisochkin] What do you value in people, officers, and commanders?

[Nikiforov] Self-discipline, skill in the use of materials, and an ability to see what is important. I have been an opponent of martinism and red tape since my young years. I fought against them as much as I could. Right down to the submission of a request to be released from duty, and I also had this episode in life.... I had occasion to meet inspectors who thought that the main virtue of an officer was knowledge of regulations by heart. Meanwhile, if you gather all of the regulations and instructions on flying, then you will have a huge library, which it is impossible to study. Indeed, this is not necessary. At the same time, an officer and a commander should know material that is necessary for the resolution of vital everyday tasks perfectly. And he should know how to act.

[Lisochkin] It is said in aviation: "Hurry up slowly..."

[Nikiforov] True. But it is added "...with short breaks between actions."

I also value normal treatment of people highly. Not in behalf of "abstract humanism." It must be understood that the training of a first-class pilot is a personal matter. To acquire all of the qualities that a military pilot needs, the graduate of a flight school undergoes training in a

unit over the course of six or seven years. In our discussion, I am purposely not mentioning the names of first-class commanders and of real officer aces, because there are many of them, and it would be unfair just to mention a few of them. It is necessary to appreciate and respect these people, not to harass them with trifles, and not to throw roadblocks in their way.

All of this by no means reduces the requirements for combat readiness. It is just as difficult to live in the Army now as everywhere, but, nevertheless, we do not have a regiment in which the whole staff would not be ready to take off to execute a combat task.

[Lisochkin] What is your attitude toward a professional army? It is somehow difficult to imagine that nonprofessionals could be serving in your regiment.

[Nikiforov] Correct. Our professionals are of a high class. They also deserve a suitable pay... But, speaking seriously, then I unconditionally support the idea of a professional army. If it is implemented, then some kinds of legal problems could arise only with respect to the sergeant and private components. Although certain responsibilities also lie with us. Let us be frank: Not everyone is meant to fly, and not every graduate of a flight school can master every type of aircraft. Therefore, a competitive selection will be required in order for real talents to be identified under the appropriate conditions.

[Lisochkin] Concerning equipment. For example, the SU-27 is really a splendid modern aircraft. But the time will come when it inevitably will have to be replaced. It has already been three years that I have had occasion to encounter what is called "conversion" in our country. The impression is a painful one. Do you not fear that there will simply be nothing with which to replace obsolete equipment?

[Nikiforov] This question is so important that I will try to answer logically. Let us examine and weigh several facts.

Today, we possess aviation equipment of the highest level. This is first.

Second. The achievements of our military-industrial complex in the creation of modern weapons of the highest technology are indisputable. But knowing the situation sufficiently, I would not begin to idealize. In past years, we built too much on pride, on partialities and antipathies, and on the personal relations of designers, producers, and clients. At the same time, by far not all of the progressive elaborations found a client. I am convinced that better results, with a reduction in expenditures, can be achieved through a sensible organization of work.

And third. Perhaps, what is most important. Earlier we talked about the anti-army campaign. Now, it seems to me, the lower critical point has already been passed. Both the politicians and the public as a whole are beginning to perceive the elementary idea more and

more that a strong army is not only a symbol, but also a guarantor of any statehood. Of course, the attitude toward it is not yet what it should be. But it will change, for common sense will prevail. This will make it possible to look to the future with optimism.

[Lisochkin] It is easy to move from optimism to the holiday. After all, you will be celebrating it in Pushkino, and not for the first time?

[Nikiforov] The Tushino air parades are known far and wide, and they have entered into history. We celebrated the first holiday here in Pushkino in 1990. It was a rather modest display of modern military equipment, and not a lot of people attended—about 20,000. But already the next year, given a significantly expanded program, we had more than 120,000 guests.

Now, the holiday will take place in Pushkino on Saturday and Sunday, from 1000 to 1700 hours. For those who have not attended it yet, I will say that it is easy to get here: Take the electric train to Detskoye Selo Station and then buses Nos. 380 and 381 to the stop at "409-ya Shkola."

[Lisochkin] I have already heard that there will be paid admission to the occasion for the first time?

[Nikiforov] When this question first arose, it was like a sharp knife for me. In previous years, we provided everything from our own resources. But, today, the Army is not in a position to receive a huge number of people, to accommodate them, and to organize a real aviation event for them without attracting additional resources. And no matter how much we racked our brains in the Military Council, we could not find any other solution. Of course, we do not plan "to make money"; all the money that is received will go to cover the expenditures on the event and to encourage the participants. I will add that free participation in it is reserved for war and labor veterans, inducted servicemen, and preschool children.

[Lisochkin] Well, Boris Yurevich, let us wish a happy holiday to the pilots and those who are involved in aviation.

[Nikiforov] I think that we can congratulate not only the professionals, but also all of those who are with us on this day. Aviation was always enveloped in Russia with a national fondness. I am convinced that it will also be this way in the future.

Flight Capabilities of Yak-38

92UM1441A Moscow KRASNAYA ZVEZDA in Russian
4 Sep 92 p 2

[Article by Konstantin Popovich, deputy chief designer at the Experimental Design Bureau imeni A.S. Yakovlev: "Yak-38: The First Domestic Carrier-Based Aircraft"]

[Text] The first VTOL [vertical takeoff and landing] Yak-38 aircraft, developed by the Experimental Design Bureau imeni A.S. Yakovlev, one of the oldest in our

country, entered service in naval aviation in 1975. The need for creating such an aircraft arose when the heavy aircraft-carrying Kiev-class cruisers, having a developed flight deck and able to carry several dozen aircraft on board, was accepted into service.

The limited size of a ship presupposed the use of aircraft able to take off without the aid of a catapult and land without using arresting gear. The less strict requirements on rolling compared to conventional aircraft carriers and also the need for the quick takeoff of a group of aircraft gave the designers the task of creating an aircraft possessing unique characteristics—vertical takeoff and landing.

The Yak-38 light ground-attack aircraft—a VTOL combat aircraft—is designed for striking enemy coastal installations and surface ships while staging from aircraft-carrying ships with a deck at least 180 meters long and also for air support of ground forces while staging from field strips and special landing sites. The aircraft can be used from mobile landing sites made in the form of a motor vehicle trailer.

In the process of flight testing and operation of the aircraft, other methods besides vertical were developed,

making it possible to launch a larger payload and increase the ground-attack aircraft's range. Specifically, this was making short takeoffs (takeoff roll of not over 120 meters) and point takeoffs (takeoff roll of less than 15 meters).

The flight-navigation system provides for manual and director control of the aircraft day or night. The weapons control system includes a gun sight, a radio-command control line instrument for air-to-surface missiles and ensures mission accomplishment using various unguided types of armament.

The Yak-38's armament, depending on the mission, may include air-to-air and air-to-surface guided missiles, 23-mm cannons, and unguided weapons carried on wing suspension points.

The aircraft has a mixed power plant. It consists of one vectored-thrust engine (with thrust vector of 95 degrees) and two lift engines with a maximum thrust in excess of 3,000 kgf.

For the first time in domestic aircraft building, an ejection system has been developed for this aircraft, which in hover modes makes it possible to abandon the aircraft automatically (without pilot intervention) in the event of an emergency.

Basic Data	
Crew size	1
Maximum takeoff weight during short takeoff, kg	11,800
Maximum payload on external suspension points, kg	2,000
Maximum payload with vertical takeoff, kg	1,000
Maximum flight speed, km/hr	1,150
Service ceiling, m	11,000
Flight range, km	
—with vertical takeoff and 750 kg payload	410
—with short takeoff with 1,000 kg payload	600
Aircraft length with pitot head, m	16.37
Wingspan, m	
—unfolded	7.12
—folded	4.45
Height of aircraft, m	4.25
Power plant	
—R-28-300 vectored-thrust engine	1
—lift engine	2
Armament:	
Guided missiles	short-range air-to-air
	air-to-surface
Unguided rockets	50-240 mm
	Cannon pods (23-mm, 250 battle reserve)
	Aviation bombs, up to 500-kg caliber

The experience of creating the Yak-38 aircraft was the basis for further work by the Experimental Design

Bureau imeni A.S. Yakovlev in this direction. But we will talk about this in the future.

CIS: NAVAL FORCES

Chernavin Blamed for Nuclear Sub Defects

92UM1431A Moscow LITERATURNAYA GAZETA
in Russian No 36, 2 Sep 92 p 12

[Interview with Captain First Rank of the Reserve I.B. Kolton by A. Tarasov; place and date not given: "Passage to Tsushima"]

[Text] Captain First Rank of the Reserve Ilya Borisovich Kolton, a professional submariner who served almost 30 years on nuclear submarines, brought to the editorial office a copy of his complaint to the Procuracy: "I request that you institute criminal proceedings against Admiral of the Fleet V.N. Chernavin, who performed acts that are subject to punishment under criminal law..."

[Tarasov] For what?

[Kolton] For those piles of metal over which the St. Andrew's Flag is raised. For the chain of deceptions that led to a total loss of strategic parity at sea. Numerous examples can be cited, because it was the self-destructive strategy of the VPK [military-industrial complex] to wrangle out colossal orders with their colossal expenditures. Somehow or other, to hand over, to deliver, to launch, and to sign an act of acceptance—this is the cherished objective of any "grandiose project." In an example I am intimate with, I want to "chronicle" one such story in which the selfish interests of the VPK found a response in the leadership of the Navy.

[Tarasov] But is it possible to hang everything on one person? And this does not resemble Admiral Chernavin—I met with him back in the Northern Fleet. For example, he made a strong impression on me. A true naval officer, with a firm will, strict principles, and high cultural thinking.

[Kolton] But you were a visiting journalist—to us officers he was an idol. As a commander, he really stood out among many with his calmness, tact, and responsibility. As a captain first rank, he was the most respected person in the fleet. I worked with him in one command post and on one shift during a cruise to the North Pole in 1972: He was on commander's watch, and I was on engineer's watch. So my attitude toward Chernavin was also enthusiastic. But all this changed later.

[Tarasov] Tell us a few words about yourself, in order to acquaint the reader. Where were you born, how did you get into the Navy, and what was your job?

[Kolton] I come from the village of Proletarskiy in the Don area. I remember, literally, the occupation, the hunger, and the cold. I was attracted to the sea—and I enrolled in the Sevastopol school of underwater navigation. The specialty—nuclear submarine mechanical engineer. I also got on the first nuclear submarine, which for us was a real miracle. When I later became the ship's and after that the division's "old man" (this is what the

chief mechanical engineers are called in the Navy), it was my duty to transmit knowledge of every screw and every safety device to each seaman and each officer. I consider it my greatest achievement in the fleet that I never permitted the loss of people or injuries to subordinates. But I will switch to my disappointment...

[Tarasov] In people?

[Kolton] The people around me were excellent. I can mention dozens of names of commanders, mechanical engineers, and navigators who went through the severe school of submarine endurance cruises, and who were courageous, competent, and resourceful. But it is that much more offensive that some had to patch up the holes of industrial imperfections themselves, and others, as their careers advanced, no longer belonged to themselves, falling into the claws of the military-industrial complex. And so, meticulous operation showed that submarines of the second generation practically differ very little from the first generation in terms of quality. But their creators tried with all of their strength to convince us that they are God knows what kind of a breakthrough in ship construction, and under this pretext they cheated the government and the people out of the next tens of billions. But the main scourge of our underwater fleet is a noisiness that exceeds American analogues by 6 to 60 times. For this reason, combat service became as absurd as an attempt by a blind and deaf boxer to win a fight with the invisible man. Well, imagine that I am closing in with an enemy who sees and hears me 60 kilometers away, but I can only see him 1 kilometer away.

What were sailors supposed to do who were battered down in these multi-ton dreadnoughts for certain death? Look for a way to save themselves. So in 1974 I developed and conducted full-scale tests of submarines of my own division of the so-called hot standby reactor mode (RGR). In two words, this means that, without spending a single ruble, it is possible to solve a problem on which the VPK expended increasing billions of resources. Essentially: At the necessary moment and for a certain period, a submarine becomes noiseless and "invisible" to foreign acoustics. Taking advantage of this, it is able to successfully break away from tracking and to execute its task. It would seem that any competent officer and naval commander would seize upon this idea and try it in operation. And that is exactly what happened. And not only sailors—afterwards our proposal was supported by Academician A.P. Aleksandrov and corresponding member of the USSR Academy of Sciences N.S. Khlopkin... In 1978 Fleet Admiral Georgiy Mikhaylovich Yegorov, commander of the Northern Fleet, placed six exclamation points on a report of Vice Admiral Matushkin, commander of a flotilla! He ordered the introduction by 20 January 1977 of RGR on nuclear submarines of the fleet. Undoubtedly, such an undertaking is not initiated in an offhand way—a number of painstaking conferences were held with science and industry, and studies were conducted in a design bureau; and, in 1978, full-scale interdepartmental tests were conducted at sea

under water. And once again the positive results were fully confirmed. The commission recommended the introduction of the RGR mode on all nuclear submarines of the Navy! Later, I also defended a candidate dissertation on it and received, with a group of coauthors, an inventor's certificate.

[Tarasov] A triumph, Ilya Borisovich?

[Kolton] Well, yes! Everything was going well, a la Schweik, "until the General Staff intervened." The act on introducing the mode, which was signed by all the representatives of science and industry and the test participants, was sent for confirmation to Admiral V.G. Novikov, deputy commander in chief of the Navy. And here it was hidden forever. But what was most distressing for me was the position of Admiral Chernavin, who soon headed the Northern Fleet. Under him there could be no question of introducing the "noiseless mode."

[Tarasov] Why do you put it so sternly?

[Kolton] This may seem to be an enigma, but in my opinion it is easy to understand. At approximately the same time, for the purposes of economy, because of the low service life of the nuclear power plants of missile submarines the command element of the Navy introduced its own proposal—the so-called single echelon mode of work (one of the two sides of the nuclear plant was temporarily deactivated). The fact that combat readiness and stability were reduced in the process and that simultaneously the time for missile launch was increased and the noisiness of the submarine was raised had no significance. After all, USSR Fleet Admiral S.G. Gorshkov, commander in chief of the Navy, and Admiral V.G. Novikov, his deputy, were personally the authors. And you will probably not be surprised that their study was nominated for a Lenin Prize. It happened that my variant "undermines" the proposal of the senior chiefs. And Admiral Chernavin had to take somebody's side.

I pushed through the same tests in 1980—this time on third generation submarines. Taking advantage, I will say frankly, of good contacts with sailors and scientists. Even S.N. Kovalev, the general designer of the project, met me halfway. The tests were conducted successfully, and even more than this. Two accidents were prevented with the help of RGR. There is no cloud without a silver lining—the general designer himself issued instructions to conduct a joint decision on the introduction of the mode. It was signed, but it was implemented in only one project. But what about the rest—the main combat nucleus? I tried to prove that my proposal not only does not contradict the "admiral's" method but, on the contrary, supplements it, removing obvious defects. But even this did not help. They thought, perhaps, that the senior mechanical engineer was making a claim for the Lenin Prize together with them?...

[Tarasov] They told you point blank the reasons for the rejection? Perhaps the mode has some kinds of flaws that torpedoed it?

[Kolton] There are more crafty and subtle moves. There is a saying: If you want to kill something, set up a new committee. As a rule, without an author, and, with me, behind my back. So the matter ended up in the National Research Institute of the Navy, but not at a good time: Chernavin came to the helm of the whole Navy as the chief of the Main Staff, and a decision was precluded. The admiral was now required to save the honor of the uniform—after all, because of him the debate dragged on for 10 years. I do not deny the seriousness of the questions that were raised. For example, concerning the nuclear safety of the mode. There were even scares that this would result in the appearance of a floating Chernobyl on the ocean. But all these fears were countered in their analysis by experts from the Institute imeni Kurchatov and by project engineers on the reactor who were conducting scientific research work. The mode proved to be safe. Its opponents accepted a compromise, but only in a struggle for the survivability of the ship, not for operational-tactical purposes! This backfired on them: After all, a submarine fights accidents several times during a cruise, but a combat situation, possibly a fatal one, occurs only once in its entire history. And the most saving remedy is prohibited!

There was a new breakthrough in August 1982. A conversation with Admiral Yegorov who then, unfortunately, was chairman of the Central Committee of DOSAAF [USSR Voluntary Society for the Promotion of the Army, Aviation, and Navy]. He learned with amazement that the instructions he issued a long time ago on the introduction of the mode in the Northern Fleet had not yet been implemented. He took me to Admiral N.I. Smirnov, first deputy commander in chief of the Navy: "Nikolay Ivanovich! I ask you, understand, if we do not implement this unique capability to ensure operational security, then it is the end of our fleet!..."

Smirnov listened to me attentively, checked with objective sailors and... ordered me to fly immediately to the Northern Fleet. To conduct an interdepartmental test on our program. I will omit the details and say only that previously even members of the commission and the crew who were aggressively predisposed by their chiefs, seeing what happened, expended the entire submarine's annual store of signal rockets in fireworks... But for me the signed act was a great gift on my fiftieth birthday.

However, at the military-technical council of the Navy I could not believe my ears: The managers of the organizations that composed the commission, mainly heroes of labor and academicians, distorted the results, citing absolutely contrary data. A real "clash" developed: bureaucrats dependent on Chernavin and on the VPK, and a group of like-minded enthusiasts from the ranks of

fleet officers supported by Yegorov, Smirnov, Kruglyakov, and a number of other qualified and independent-minded admirals. If the mode was harmful and dangerous, and even useless, no one would have allowed it to undergo the next tests in 1984. Believe me—passions were aroused, and there was the threat of officers coming to blows. As always, only submerging under water brought everyone together—and again the result exceeded all expectations. We took care to answer all doubts, even those that were far-fetched and inconceivable. A repeat military-technical committee of the Navy passed it without a single comment. Now, already by a directive of S.G. Gorshkov, commander in chief of the Navy, and a joint decision with industry, a procedure was established for introducing the proposals. What else could be put in opposition? It was found: It was proposed to conduct the same kinds of tests, this time in the Pacific Ocean, under higher ocean temperatures and during tactical exercises. Well, it is fair. And the conclusions of the Pacific Ocean personnel engaged in tactical training in 1986 recorded laconically: "... It goes without saying. The effectiveness is exceptional."

You don't say—after this Chernavin himself became commander in chief of the Navy.

And in October 1986 at a conference which was conducted by the chief of staff Fleet Admiral K.V. Makarov...

[Tarasov] That is quite a name!

[Kolton] On the other hand, the methods were depressing. All the previously adopted decisions, all the results of the tests, and all the tactical exercises were rudely discarded. The reports of those who stood for the truth were ignored, and this was no less than the Naval Academy, the scientific-technical committee of the Navy, and the State Acceptance Committee of the Navy. The group of officers who backed this method was simply boorishly suppressed. As if to mock, Makarov set aside a total of three minutes for my statement, and, in the process, rudely interrupted me twice. This is the way perestroika started in the fleet a la Chernavin.

[Tarasov] But did you meet with him personally? Did you try to explain to him in a more cordial way. One sailor to another?

[Kolton] Perhaps you have heard that it is not acceptable in the fleet to address yourself point-blank to a high rank. And it is more difficult to get in to see the admiral without a summons than it is to dive through ice. But we did have meetings. Including particularly on this difficult subject. After hearing my arguments, and not finding any arguments against them, he concluded: "Who am I supposed to believe—you or the admirals and the academicians?" I answered: "Only the facts stated in the test protocols." Do you know what he said to this? "And you, button up your button." The final argument. After this, the battle was only through correspondence. When letters to him personally proved to be totally useless, I then wrote to the minister of defense,

the CPSU Central Committee, Presidents Gorbachev and Yeltsin... Moreover, it was not only I who wrote—letters in defense of RGR were written by Academician A.P. Aleksandrov, Admirals Yegorov, Chernov, and Golosov, and many of my coworkers and naval and industrial colleagues, designers, and scientists of the Nuclear Power Institute. The result: In "good old time," the letters got to the VPK party patron in the Politburo, L.N. Zaykov... And it was he who pushed through the CPSU Central Committee and the USSR Council of Ministers a decree for review by the commander in chief and manufacturers, in effect to this day, according to which the fleet's acceptance of weapons and combat equipment that are not only of poor quality but also dangerous to personnel is virtually legalized.

[Tarasov] Not bad. Do you have other examples besides the unfortunate RGR?

[Kolton] Numerous. After all, in 1978 I was transferred from the "trenches" of the Northern Fleet to Moscow, to the position of representative on the permanent commission for state acceptance of ships of the Navy.

[Tarasov] But here you could also use your authority. Influence the process...

[Kolton] I will cite an example. In 1982, in the acceptance of the nuclear submarine Komsomolets—I trust a familiar name?—industry submitted a program of tests to me. I found that there was no separate item on tests of the rescue chamber—VSK—itself. But this is the only means of crew rescue at such depths. I said: Tests are mandatory. Full-scale, at a depth of 1,000 meters, with a trim-difference, as required, and under a load with a special ballast according to the weight of the personnel. Industry found thousands of excuses to refuse. I held my ground. We included the item and worked up the method, and this took two months. It was approved by the state acceptance chairman and the commander in chief. But, then, within two weeks, behind my back, a joint decision appeared not to implement this item during the state tests, but to move it to operational tests; that is, after turning the submarine over. And, here, in putting out to sea, the chamber separated in an unsanctioned way. Can you imagine the crew's surprise? While searching for it in the sea, a warrant officer-diver drowned, in other words, in the way we do things. The chamber was found, defects in the construction were found, and they tested it again anyhow. Not according to the method that I required, but simplified, at 30 meters, on an even keel. The chamber came to the surface, it was checked off, and everyone knows what happened in the loss of the Komsomolets. The chamber killed people. This is the typical scenario of any accident and tragedy—because of "burial" equipment shoved into the water by the VPK. Because accepted and turned over equipment—this is, I repeat, money, prizes, decorations, new orders, and so on. A comfortable existence.

[Tarasov] For the time being a Tsushima is not breaking out. But how is your much-tested noiseless mode?

[Kolton] I am completing it. The letters from Zaykov were returned to Chernavin, and his signature was decisive once more. I will not forget one of the replies addressed to the CPSU Central Committee, which came as a "blow" to me, and which was based on complete disinformation. It carried the signatures of A. Lukyanov, O. Baklanov, D. Yazov, I. Belousov, and G. Marchuk who joined them.

[Tarasov] Almost the entire State Committee for the State of the Emergency?

[Kolton] Well, of course. And tell me, who will Gorbachev believe: Lukyanov or a hassled captain first rank? This arbitrariness compelled me at first to turn to USSR Procurator General Trubin, then to his Russian successor Stepankov. And again I find that through Burbulis and other new structures the investigative documents are going to Chernavin "for signature..." So, there is the triumph of justice!

[Tarasov] But the fleet?

[Kolton] Between us, the fleet understands perfectly and uses "underground" handwritten instructions that can be found in practically all submarines. But this can lead to an accident and the discredit of the idea itself. There is no documentation worked out by project engineers, there is no working off on trainers, there are no training manuals. That is, there is no inculcation of what has been recommended many times.

[Tarasov] This means that, as before, the fleet is under the gun. But perhaps this subject has lost urgency in connection with the arms reductions?

[Kolton] Just the opposite—we have too few submarines left to make them floating targets and doom them to destruction. The urgency has increased!

[Tarasov] Well, what if Chernavin displayed real pertinacity and opposed the pressure of the VPK, which is turning over a "Tsushima" fleet?

[Kolton] He would be removed.

[Tarasov] You see him in the dock, without shoulder boards and decorations, and, afterwards, in a jail cell?

[Kolton] I am not striving to see him behind bars. I am not that bloodthirsty. The main thing is an open and detailed process, analysis to expose all of the rust that is permeating the military-industrial dinosaur. This is what I fear. It is a question of the life and death of my comrades.

Kasatonov Orders Re-Subordination of Oath Takers

92UM1423B Moscow NEZAVISIMAYA GAZETA
in Russian 21 Aug 92 p 2

[Article by Vera Kuznetsova: "Not an Order but a Directive"]

[Text] Under a directive signed on 6 August by Georgiy Gurinov, chief of staff of the Black Sea Fleet, those personnel of the former CIS Navy who took the Ukrainian instead of the CIS oath must be assigned to the Ukrainian Navy. This essentially means that these officers and seamen will be discharged from the fleet, since the organizing committee for the establishment of the Ukrainian Navy have neither financial nor legal (until the talks begun in Yalta by Yeltsin and Kravchuk are wrapped up) possibilities for expansion.

According to a NEGA report the order to discharge the patriots from the Black Sea Fleet was issued by Adm Kasatonov. However, the fact that the directive was signed by Vice Adm Gurinov indicates that the document was issued with the knowledge of the commander in chief. Gurinov's directive, issued in contradiction to the Yalta agreement of 3 August, only confirms numerous other instances of a confrontational attitude on the part of the command element of the former CIS Navy. The planned "transfer" of those who took the Ukrainian oath from the Black Sea Fleet shows that the command element is in no hurry to abandon its posts and is demonstrating its influence to all, including the presidents of Russia and Ukraine.

Incidents in the Barents Sea

92UM1310C Moscow MORSKOY SBORNIK
in Russian No 5-6, May-Jun 92 pp 21-22

[Article in reply to reader inquiry by Navy Chief Navigator Rear-Admiral V. Aleksin and CIS Combined Armed Forces Press Center under the rubric "Answers to Our Questions": "Incidents in the Barents Sea"]

[Text] "The American nuclear submarine *Baton Rouge* collided with a nuclear-powered submarine of ours in Russian territorial waters on February 11. The next violation of our waters by a foreign submarine was on March 25. The U.S. Navy denies the fact of violating our maritime borders. Most of the Russian mass media are evaluating these incidents in such a way that it may be concluded that we are the ones to blame for them. The more so as the navy has not come forward with an official statement on any of these incidents. I would like to receive some elaboration from the pages of MORSKOY SBORNIK."

—Captain 1st Rank Yu. Blokhin

An analysis of submarine accidents shows that collisions of U.S. Navy and USSR Navy submarines occurred almost annually during the period from 1967 through 1986. There had been no such collisions for five years since 1986 until 11 Feb 92.

The collision with the U.S. Navy submarine on 11 Feb 92 occurred for the first time on a naval combat practice range located in our territorial waters. The American submarine's sonar most likely lost our boat after it changed course. And since there were several other fishing vessels in the area whose noise sounded like the

7. Surface vessels underway
8. Target group No. 4
9. Distances in miles
10. Cape Tsyngvolak
11. Rybachiy Peninsula
12. Entrance to Matavskiy Gulf
13. Pogannavalok Island
14. Entrance to Kola Gulf
15. Kildin Island

After the collision the commander of the Baton Rouge left our territorial waters by the shortest route possible

and, after some time, reported a collision with a Russian submarine. The divergence in coordinates of that point was less than six cable lengths for both submarines.

The very fact of the collision of the submarines as physical bodies was, of course, accidental. But the causes that led to the collision were not. They are concealed, in my opinion, first and foremost in the actions of the commander of the American submarine. First of all, he was in violation of the territorial waters of Russia, the position of which in that region is defined in Article 5 of the Law "The State Border of the USSR" of 1982 and the decrees of the USSR Council of Ministers of 7 Feb 84 and 15 Jan 85 with a definition of the List of Geographical Coordinates of points determining the position of the baselines for computing territorial waters. They are duly announced in the Navigational Notices to Mariners and should be known on board the Baton Rouge. The position of our territorial waters in that region has not been disputed by anyone, including the United States, since 1982.

Second, he committed an unsanctioned entry into our combat practice range where there was another submarine, creating a collision-hazardous situation.

Third, he was trying to track a Sierra class (according to the NATO classification) nuclear torpedo submarine of ours, which was performing combat training tasks off our shores and was in no way threatening either the United States or the ships of the U.S. Navy.

Fourth, having lost sonar contact with our submarine, the Baton Rouge went up to periscope depth, creating the threat of a collision with the fishing vessels as well, instead of leaving the alien waters by the shortest route possible.

In the opinion of U.S. Secretary of Defense R. Cheney, "he was not surprised by the incident in the Barents Sea and does not see any reason to make changes in the nature of U.S. Navy operations." But the secretary knew that we were affirming our peaceable intentions with practical deeds after the declarations of our presidents on cutbacks in armed forces and restrictions on military activity. We have thus reduced our ballistic-missile submarines in the combat-patrol areas by more than three-fold over the last five years, and have pulled them back from the shores of the United States. We withdrew all ships from the Mediterranean Sea and the Indian Ocean in 1991.

If I may ask in this regard, if the CIS Navy does not have any naval forces in the Pacific Ocean deployed against the United States, why does the United States constantly

keep up to 23 ballistic-missile submarines at combat patrol stations in the Atlantic and Pacific oceans aimed at targets on the territory of the CIS, and 10—12 nuclear-powered submarines, by and large of the Los Angeles class (like the Baton Rouge) off our shores, with Tomahawk cruise missiles able to strike strategic targets deep in the heart of our territory?

The oceanic strategy of "forward naval lines" that was developed by former U.S. Navy Secretary J. Lehman in 1982 could suggest an answer to that question, judging by the incidents in the Barents Sea. Its aims were and remain to lock up the USSR (CIS) Navy at its bases, not to permit it to deploy into the oceans and seas and to destroy it at the bases with the start of combat operations.

The reaction of R. Cheney to the collision of the two nuclear submarines in the Barents Sea is understandable, but why are the Scandinavian countries and Greenpeace silent when they had such a sharp reaction to the possible ecological consequences of the loss of our Komsomolets submarine in 1989? Either of these two submarines, after all, could have perished in less than a minute as a result of their collision on 11 Feb 92 in the immediate proximity of the Scandinavian shore.

A real and, most importantly, bilateral reduction in confrontation at sea—the restriction of naval activity and mutual coordination and systematic reduction of both our navy and the U.S. Navy—are essential in order to rule out the precursors for similar collisions.

Ships of the Northern Fleet—the destroyers Greymashchiy and Rastoropnyy—detected a submerged foreign submarine at the entrance to the Kola Strait on 25 Mar 92 at 0900 hours. There were no submarines of the CIS Navy in that area. The foreign submarine was observed for an hour inside the territorial waters of Russia, the position of which is defined by Russian legislation and is well known to mariners. The ships of the Northern Fleet tried to bring the unknown submarine to the surface for an hour using established signals, but it, having detected the tracking, left the boundaries of the territorial waters of Russia underwater at a speed of 12 knots.

The foreign submarine, trying to get away from the tracking ships, used sonar jamming instruments. The various ASW forces of the Northern Fleet on duty monitored the movements of the unknown submarine for several hours. The conclusion could be drawn, based on analysis of the maneuvering, that the unidentified submarine was a nuclear one.

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Diagram of the detection of a foreign submarine in the Barents Sea on 25 Mar 92

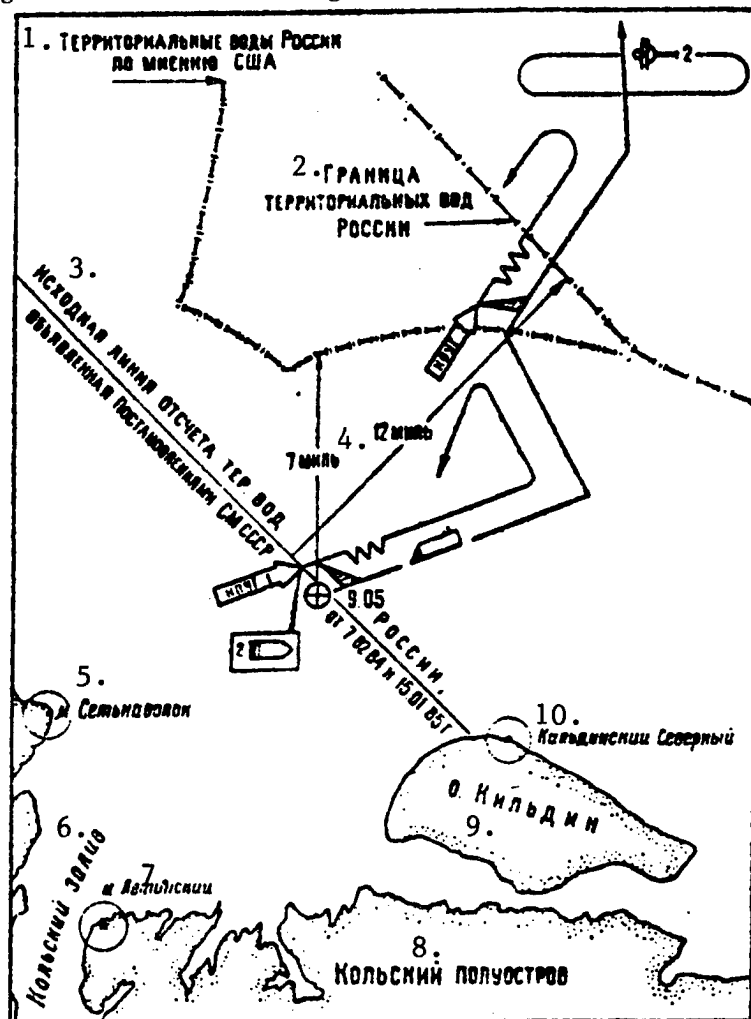


СХЕМА ОБНАРУЖЕНИЯ ИНОСТРАННОЙ ПЛА В БАРЕНЦЕВОМ МОРЕ 25 МАРТА 1992 Г.

Key:

- | | |
|---|-------------------------|
| 1. Territorial waters of Russia in the opinion of the United States | 4. Distances in miles |
| 2. Boundary of territorial waters of Russia | 5. Setnavalok Island |
| 3. Baseline for determination of territorial waters of Russia as announced by decree of the USSR Council of Ministers on 7 Feb 84 and 15 Jan 85 | 6. Kola Gulf |
| | 7. Cape Letinskiy |
| | 8. Kola Peninsula |
| | 9. Kildin Island |
| | 10. Kildinskiy-Severnyy |

So That the Seas Are Safe

92UM1310F Moscow MORSKOY SBORNIK
in Russian No 5-6, May-Jun 92 pp 70-73

[Article by Candidate of Legal Sciences Captain 1st Rank (Reserve) V. Markov: "So That the Seas Are Safe—(A System of Agreements on the Prevention of Incidents at Sea)"]

[Text] Our state has, as of the present time, concluded agreements on the prevention of incidents at sea with the

governments of the United States, Great Britain, the FRG, France, Canada, Italy, Netherlands, Norway, Spain and Greece.

The aim of those agreements was unambiguously formulated in the preambles, which affirmed the aspiration of the parties to ensure the safety of the sailing of ships and the flights of helicopters outside the limits of territorial waters.

The circle of objects and relations constituting the subject of them has been expanded along with the increased

number of participants in the bilateral agreements. Among them are the obligations not to employ lasers in such a way as to inflict damage to the health of personnel or cause damage to equipment on board a ship or aircraft of the other side; not to launch signal rockets or other pyrotechnics in the direction of ships and aircraft of the other side; not to create interference intentionally with the operation of communications systems of the ships and aircraft of the other side; to extend the prohibitions contained in the agreements to actions undertaken in relation to non-military aircraft; and, to take necessary steps to see that the commanders of ships and aircraft display maximum caution and prudence in areas that have been declared by the other side as temporarily hazardous for maritime and aerial navigation, among others.

All of the agreements are duly published and should be found by the side of the ship or aircraft commander. The amount of them is quite large, however. We have developed a table for ease of use (see figure) that makes it possible, proceeding from the affiliation of the ship or vessel of this or that country, to determine quickly the list of requirements arising out of the bilateral agreements. Analogous information, as well as the requirements arising out of newly concluded agreements, could be entered into the tables in the future, thereby updating them.

How could this process develop in the future?

Several points of view on possible ways of further coordinating efforts aimed at the prevention of incidents at sea outside the limits of territorial waters have taken shape up to the present time, which makes it possible to delineate the following approaches to this problem:

1. Continuation of the process of concluding bilateral agreements between us and the NATO countries.
2. The conclusion of regional agreements.

Several directions for work in this area are known:

- a) the development of proposals, on a multilateral basis within the framework of the European-wide process, pertaining to an agreement on the prevention of incidents at sea outside the limits of territorial waters and, in that context, the coordination of measures to prevent incidents in bodies of water adjoining Europe and in the airspace above it;
- b) the conclusion of agreements, on a multilateral basis, on the prevention of incidents at sea outside the limits of territorial waters that would extend to all the seas adjoining Northern Europe;
- c) the conclusion of agreements on the prevention of incidents at sea outside the limits of territorial waters between us, Japan, the United States, the PRC, North Korea and South Korea for the purpose of preparing the external conditions for creating a nuclear-free zone in the northwestern portion of the Pacific Ocean;

d) the conclusion of agreements on the prevention of incidents at sea outside the limits of territorial waters within the framework of the Asian-Pacific region;

e) the conclusion of agreements on the prevention of incidents at sea outside the limits of territorial waters between us, the United States and the Mediterranean states in the overall context of disarmament.

3. The conclusion of a universal agreement on the prevention of incidents at sea outside the limits of territorial waters.

The abundance of approaches testifies to the necessity of straightening out and imparting a systematic nature to the views that have taken shape on the problem of preventing incidents at sea.

It seems expedient to us, first and foremost, to expand further the circle of objects and relations that constitute the subject of the agreements. The agreements in force today were structured using the empirical materials that existed up to the moment of their conclusion, and thus naturally could not take into account many potentially dangerous situations. They encompass only the relations between pairs of subjects—a military ship and a military ship, a military ship and an aircraft, an aircraft and a military ship, an aircraft and an aircraft, a military ship and a civilian vessel and an aircraft and a civilian vessel (the actions of military ships and aircraft in relation to civilian aircraft are not regulated in general). The provisions contained in the Soviet-Canadian and Soviet-Italian agreements are an exception.

It should also be stated that standards are lacking in practice for submarines that are underwater. The only exception here is the obligation contained in the agreements to warn of the location of submarines that are underwater when conducting exercises in conjunction with them, and the recommendation set forth in Resolution IMO A.599(15) of 19 Nov 87. A submarine that is underwater, in accordance with that, "with the availability of information on a fishing vessel and its gear, should keep to the side of the path of that fishing vessel and its gear." Standards are completely lacking that regulate mutual relations with other underwater conveyances, artificial islands, installations and structures. There is unfortunately no indication anywhere of the increased degree of danger when maneuvering close to ships with nuclear power plants and the risk of a nuclear incident that that entails.

Filling in those gaps could be one way of improving the agreements and imparting greater completeness to them.

The formulation of a hierarchical structure that links, in a unified complex, the agreements on various levels seems possible when considering the issue of a system of agreements on the prevention of incidents at sea outside the limits of territorial waters.

A universal agreement containing the concept of an incident and a hazardous situation, along with the basic

principles of the relation of states in the naval realm, could envisage the possibility of regular meetings for the purpose of analyzing and summarizing experience accumulated within the framework of bilateral relations, devising new recommendations (depending on the level) to take shape among the naval forces of the member nations of the agreement, etc. The interval between those meetings could be quite large (five years, for example). The mechanism of the agreement should furthermore envisage the possibility of emergency consultations in the event emergency or especially hazardous situations arise, as well as an arbitration body, in which the participants in the agreements could resolve any problems that arise among them connected with the interpretation and application of the provisions of the agreements.

A code of signals analogous to the tables of special signals supplementing the bilateral agreements could clearly be created at the universal level as well. This code, however, would be expediently formulated not in the form of a supplement to the agreement, but rather as a separate section of the International Code of Signals.

The universal agreement should, in our opinion, provide for the possibility of a broader circle of participants, regardless of whether their naval forces are global, long-range or coastal.

Bilateral agreements will, it seems, remain the principal form of agreements of this type. They are the most effective, since the channels of communication envisaged in accordance with them make it possible to exchange information on incidents that have occurred in operative fashion, while the mechanism of consultations provides an opportunity to find mutually acceptable solutions in situations that are not directly envisaged by the agreement.

Bilateral agreements already directly link the states that possess navies operating on a global scale. They could

also be concluded, in the future, among states that have long-range navies that are not in allied or other relations of collaboration with each other. The amount of obligations contained in them could vary for various pairs of states, depending on the composition of their naval forces and the nature of the activity as defined by the presence or absence of aircraft carriers, large amphibious-assault forces, developed infrastructures for offshore oil fields, the degree of interest in carrying out maneuvers, exercises and the testing of hardware and weaponry in the open sea, etc.

Regional agreements could be a kind of intermediate link in the formulation of an overall system of agreements aimed at reinforcing strategic stability in maritime regions in which, by virtue of the geographically limited nature of the water spaces and their high level of saturation with naval fleets, the likelihood of incidents and hazardous situations arising in the open sea is especially high. These regions could include, first and foremost, the Mediterranean and South China seas. It is natural to assume that the whole system of mutual rights and obligations (regulating the relations of military ships of the navies of nations participating in such regional agreements and their military aircraft) should also operate outside the limits of those regions in the whole area of the world's oceans lying outside territorial waters.

The concept of a three-stage system of agreements on the prevention of incidents at sea seems to be logically justified in this regard. The first (basic or working) level of that system could be the aggregate of bilateral agreements, supplemented for regions with a high concentration of naval forces with agreements of the higher—second (regional)—level. The summit of this hierarchical structure could become a universal agreement (the third level) containing the basic principles making it possible to avoid hazardous situations, prevent the appearance of incidents at sea and settle them quickly, as well as coordinate efforts in this realm at the level of bilateral and regional agreements.

Requirements for the Actions of Ships and Aircraft of the Parties Arising Out of the Bilateral Agreements on Averting Incidents at Sea Outside the Bounds of Territorial Waters

No.	Requirements
For ships:	
1	to observe unswervingly the International Regulations for Preventing Collisions at Sea of 1972
2	not to perform maneuvers in areas of intensive navigation where systems for the separation of vessel traffic have been instituted
3	not to constrain the maneuvers of ships restricted in their capability to maneuver (supporting the takeoff and landing of aircraft, replenishing supplies while underway)
4	not to constrain the maneuvers of ships that are under surveillance
5	to use special signals to signify one's actions and intentions
6	not to undertake simulation of attacks via the training of guns, missile launch installations, torpedo launchers and other types of weaponry in the direction of ships
7	not to undertake simulation of attacks via the training of guns, missile launch installations, torpedo launchers and other types of weaponry in the direction of military aircraft
8	not to discharge any objects in the direction of ships that could pose a hazard to ships and their sailing

Requirements for the Actions of Ships and Aircraft of the Parties Arising Out of the Bilateral Agreements on Averting Incidents at Sea Outside the Bounds of Territorial Waters (Continued)

No.	Requirements
9	not to use search lights to illuminate the bridges of ships
10	not to use search lights to illuminate the cockpits of aircraft in flight
11	not to employ lasers in such a way that they could cause harm to people
12	not to employ lasers in such a way that they could cause damage to the equipment of the other party
13	not to launch signal rockets in the direction of ships
14	not to launch signal rockets in the direction of aircraft
15	to warn of the presence of submerged submarines within areas of training with submarines
16	to take steps to increase caution when maneuvering close to submarines on the surface
17	to display caution in actions in temporarily hazardous areas
18	not to permit actions aimed at the seizure of property of the other party at sea
19	not to undertake the hazardous actions indicated in Point 18 in relation to non-military maritime vessels
20	not to undertake the hazardous actions indicated in Point 18 in relation to non-military aircraft
21	not to create intentionally the jamming of communications systems of ships and aircraft
22	to display maximum caution in temporarily hazardous areas announced by the other party
For aircraft:	
1	not to simulate attacks or weapons delivery against ships
2	not to simulate attacks or weapons delivery against aircraft
3	not to permit the execution of various aerobatic maneuvers over ships
4	to take all possible steps to ensure safety when converging with aircraft of the other party, especially at night and under conditions of reduced visibility
5	to display caution in converging with non-military aircraft
6	to have aerial navigation lights turned on when flying in the dark or in instrument flying
7	not to discharge in the direction of ships any objects that could pose a hazard for ships or their sailing
8	not to undertake the hazardous actions indicated in Point 7 in relation to non-military maritime vessels
9	not to undertake the hazardous actions indicated in Point 7 in relation to non-military aircraft

Requirements for the Actions of Ships and Aircraft of the Parties Arising Out of the Bilateral Agreements on Averting Incidents at Sea Outside the Bounds of Territorial Waters (Continued)

No.	Countries participating in the agreement:									
	United States	Great Britain	FRG	France	Canada	Italy	Netherlands	Norway	Spain	Greece
For ships:										
1	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C
4	C	C	C	C	C	C	C	C	C	C
5	C	C	C	C	C	C	C	C	C	C
6	C	C	C	C	C	C	C	C	C	C
7			C	C	C	C	C	C	C	C
8	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C
10				C	C	C	C	C	C	C
11	A	D	D	C	C	C	C	C	C	C
12	A		D	C	C	C	C	C	C	C

Requirements for the Actions of Ships and Aircraft of the Parties Arising Out of the Bilateral Agreements on Averting Incidents at Sea Outside the Bounds of Territorial Waters (Continued)

No.	Countries participating in the agreement:									
	United States	Great Britain	FRG	France	Canada	Italy	Netherlands	Norway	Spain	Greece
13	D			C	C	C	C	C	C	C
14	D	D		C	C	C	C	C	C	C
15	C	C	C	C	C	C	C	C	C	C
16	D									
17	D	D	D							
18			D							
19	B	C	C	C	C	C	C	C	C	C
20					C	C				
21									C	
22										C
For aircraft:										
1	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C
4	D									
5	D									
6	C	C	C	C	C	C	C	C	C	C
7	C	C	C	C	C	C	C	C	C	C
8	C	C	C	C	C	C	C	C	C	
9					C	C				

Notes:

A—These provisions are legally codified in Article IV of the Agreement Between the Government of the USSR and the Government of the United States on the Prevention of Hazardous Military Activity of 1989

B—This provision legally formulated in the Soviet-American Protocol of 1973

C—Standard contained in an agreement

D—Standard formulated in a summary document of bilateral consultations

Empty—Standard is lacking

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Naval Accidents Prompt Officers To Request Formation of Special Investigative Group

92UM1413 Moscow NEZAVISIMAYA GAZETA
in Russian 20 Aug 92 p 6

[Article by Albert Khrapovich, Russian Federation Committee on Affairs of Servicemen and Their Family Members: "The Time Has Come for Uncomfortable Questions (The Causes of Losses in the Russian Navy Have Not Been Fully Analyzed)"]

[Text] As INTERFAKS reported with reference to the press service of the CIS Navy, a fire broke out on the destroyer *Bespokoinny* in the port of Baltiysk (Kalinin-grad Oblast), as a result of which Senior Lieutenant Sergey Kazakov died from carbon monoxide poisoning and five sailors received minor poisoning.

During the first 6 months of 1992, the following major accidents and emergencies have occurred in the Navy:

- explosion of a solid-propellant missile on a Typhoon-class nuclear-powered submarine;
- explosion of a high-pressure air compressor on another nuclear-powered submarine;
- fire on the nuclear-powered cruiser *Frunze*;
- fire at a munitions depot in Vladivostok;
- flooding of a compartment on a large antisubmarine-warfare ship.

The article by Captain 1st Rank Aleksandr Demchenko, "Accidents Also Happen on the American and British Submarines," published in NEZAVISIMAYA GAZETA

on 23 June 1992 (No 117), must not be disregarded. The problem in question concerns not only specialists—it concerns each of us.

A mistake made by a commentator on a Central Television broadcast, who said that the U.S., British, and French navies have not lost a single submarine during all the postwar years, was used as the pretext for writing the article. The mistake is obvious, and against the background of our heavy losses in recent years it indeed should not be disregarded. However, having said "a," we must also say "b."

The thing is that at one of the collegiums of the Russian Federation Government Committee on Affairs of Servicemen and Their Family Members, one of the most critical questions for the Army, Navy, and servicemen and their families was raised—"On Death and Injury of Servicemen in Peacetime and Urgent Measures for Their Prevention." There it was also stated that the U.S., British, and French navies have not lost a single submarine, but during the last 24 years. After the loss of two U.S. Navy nuclear-powered submarines in 1968, the Americans thoroughly analyzed the causes of the losses and made practical conclusions, after which the losses ceased.

During this same time, in just the last 10 years, due to accidents and disasters, our Navy has lost several submarines (the figures of 4-5 are cited in the press), and hundreds of people have died. But the most important thing is not clear—the causes of the losses were not fully disclosed (the investigation into the loss of the Komsomolets nuclear-powered submarine in 1989 had to be resumed) and corrected in practice, not on paper.

How has the leadership of the Navy reacted to those questions which were examined at the collegium? First of all, Commander-in-Chief of the Navy V. Chernavin, personally invited to the meeting, did not come. Second, as far as we know, he also did not consider it necessary even to discuss at the Main Staff of the Navy the questions raised by the collegium, although, I repeat, these involved the lives and fates of people subordinate to him. Instead, the typical articles appeared in the press. A little earlier, A. Demchenko came out with a lengthy interview with the chief navigator of the Navy, Rear Admiral V. Aleksin, in *ROSSIYSKAYA GAZETA*. He also tried to prove that things are not in the least worse in our navy than in "their" navies. (He said roughly the same thing in an interview for *IZVESTIYA* dated 7 August 1992.)

Both attempt to prove that following the loss of the Komsomolets and its 42 crew members, steps have been taken and the accident rate in the Navy has decreased considerably, but not a word was mentioned about what specifically has been done to eliminate the causes of the accidents and disasters. Meanwhile, experts know very well that there have been no improvements in the Navy in matters of personnel screening and acquisition, in

their training, or in the condition of the training (including repair) facilities. Thus, up to now the 1987 Joint Resolution No 1241-302 of the CPSU Central Committee and the USSR Council of Ministers has been in effect, making it possible for military industry to turn over to the Navy ships with defects.

Another invigorating (it is hard to call it anything else) article in *KRASNAYA ZVEZDA* on 3 June 1992 by Vice Admiral O. Yerofeyev, newly appointed commander of the Northern Fleet, is surprising (more accurately, distressing) in this regard. In his words, the fleet has no special problems other than, perhaps, a minor delay in payment of pay and allowances to certain units and ships.

Many members of the fleet (and, apparently, they are not the only ones) remember one of the secret but mandatory characteristics for an officer's promotion that satisfied superiors more than other characteristics: "He does not ask questions." It is not important here that rank-and-file sailors, warrant officers, and officers subsequently have to pay for this "ability" later with their blood and sometimes their lives. It is not important that mothers in black even today continue to zinc coffins and lie down on the tracks.

So, Aleksin and Demchenko reported, Yerofeyev reported (two nuclear-powered submarines were lost under his direction), V. Chernavin reported (he has more "on account," and materials for bringing to account have long been in the Procuracy of the USSR and now the Russian Federation)—and, you see how at the very "top" they remember: these people do not ask uncomfortable questions!

There is one hope: If you proceed on the material published in *KRASNAYA ZVEZDA*, the present minister of defense of Russia, Pavel Grachev, likes "every-one to tell him like it is without embellishment."

However, doubting that the minister will wait for a report "without embellishment," many fleet officers are proposing that a special commission made up of independent experts be created for a comprehensive and objective investigation of the state of the Russian Navy today, with conclusions and suggestions for its organization, use, and further organizational development. In the Committee on Affairs of Servicemen and Their Family Members, they believed that the proposal merits attention. It has been included in a special report to the president.

Fire on Cruiser 'Novorossiysk' Reported

*92UM1421B Moscow KRASNAYA ZVEZDA
in Russian 25 Aug 92 p 3*

[Article by *KRASNAYA ZVEZDA* Correspondent Vladimir Maryukha: "Accidents: Fire on the Cruiser 'Novorossiysk': No Victims, but Only Human"]

[Text] According to a report by Navy Press Center Chief Captain 1st Rank Valeriy Novikov, a fire broke out on the Novorossiysk Heavy Aircraft Carrying Cruiser (Pacific Ocean Fleet) on the night of 24 August. According to preliminary data, ignition occurred in one of the officers' cabins due to an electrical short circuit. The fire was extinguished and there were no human victims.

But there nevertheless are "victims". The fire on the Novorossiysk once again shed light on the problems of aircraft carrying cruisers that stand apart in the general stream of the Navy's problems. The Aircraft Carrier Minsk, the former Pacific Ocean Fleet Flagship, is in agony and dying (KRASNAYA ZVEZDA wrote about that on 25 March 1992). Now, it seems that the Novorossiysk's turn has arrived and it is currently standing at the dock and awaiting its fate. A reduced crew is serving on the ship and its task is to prepare the heavy aircraft carrying cruiser to be mothballed. But, alas, that is a half measure. It is impossible to ensure prolonged storage for a ship if a significant portion of the mechanisms and ship structural elements on it are unfit for future operation and if proper repairs according to regulations have not once been conducted during a decade of service. Therefore, the fire on the Novorossiysk is only the first sign that attests to the fact that the labor of thousands and thousands of people that lent substance to the ship can become nearly the greatest victim of the mismanagement and political ambitions that at times conceal the navy's troubles.

Performance, Specifications of 'Yakhont' Coastal Minesweeper

92UM1436A Moscow KRASNAYA ZVEZDA in Russian 1 Sep 92 p 2

[Article by Sr Lt Vasilii Fatigarov: "'Yakhont': The Basis of Russia's Minesweeper Forces"]

[Text] The Yakhont coastal minesweeper was designed in the 1960's to search for, mark, and destroy bottom, near-bottom, moored, and free-floating mines on roadsteads, in harbors, and on coastal fairways. Antimine security for submarines and surface ships and vessels going to and from bases and during sea passage in coastal areas was also considered the responsibility of the Yakhont.

It was to replace minesweepers of earlier designs which had been in continuous service since the first postwar years. The chief designer of the Yakhont, Valeriy Ivanovich Nemudrov, and his comrades from the St. Petersburg Western Planning and Design Bureau were able to create a ship which even today is rightfully considered modern. The builders at the Avangard Shipyards at Petropavlovsk and earlier at the Vladivostok Shipyards delivered these minesweepers to all the country's fleets.

Specifications and Performance Characteristics of Yakhont Coastal Minesweeper

1. Displacement:	
standard	about 430 tons
loaded	about 460 tons
2. Dimensions (in meters):	
extreme length	about 50
extreme beam	about 9
mean draft	over 2
3. Top speed	about 14 knots (over 26 km/hr)
operating speed	about 10 knots (over 18 km/hr)
4. Range	1,500 nm (over 2,700 km)
5. Endurance	15 days
6. Crew size	45
7. Main propulsion unit:	two diesels with total output of about 2,200 hp; electric power generating unit with output of about 300 kW.
8. Hull: material—	fiberglass-bonded wood
9. Armament:	
—a. Antimine:	mechanical sweep; loop magnetic sweep; solenoidal magnetic sweep; acoustic sweep; underwater towed television mine searcher-destroyer; surface net sweep; linear charges;
—b. Missile-artillery:	30-mm twin automatic mount; 25-mm twin turret gun mount; 15 portable anti-aircraft missile systems;
—c. Sonar:	moored and bottom mine sonar detection gear; underwater sound communication and identification sonar gear;
—d. Radar:	identification radar; navigation radar.

The minesweeper will remain the basis of the Navy's minesweeper forces until 1995. There are plans to replace it with a qualitatively new ship, which cannot yet be discussed.

1986 Fire on Nuclear Sub Detailed

92UM1433A Moscow ROSSIYSKAYA GAZETA in Russian 2 Sep 92 p 6

[Article by Captain First Rank Yevgeniy Nikitin: "The Mystery of the Submarine Yanka"]

[Text] Six years ago, in October 1986, as a result of an accident in the region of the Bermuda Triangle a Soviet nuclear-powered submarine with ballistic missiles on board sustained damaged and sank. The tragedy in the Atlantic coincided in time with the Reykjavik meeting of the leaders of the two world powers: the United States and the Soviet Union. Perhaps this is why nobody except the crew and the fleet command knows anything about this yet.

Fatal Injury

On the morning of 3 October 1986 there were no signs of anything unusual. The strategic nuclear-powered missile submarine kept strictly to the cruise schedule developed at the base and approved by the command. The electronic equipment of the navigation systems accounted

for the slightest changes in the course and speed. The submarine was patrolling in a region of the West Atlantic.

Soon after the regular shift took over the watch the ship started to shake from being pushed. At that the missile silo was unsealed. Some sea water made its way into it and pressed down on the containers holding the liquid components of the rocket fuel. Missile combat unit commander A. Petrachkov sounded the alarm in the missile bay, reported to the submarine's main command point, and gave the command to open the cremailleres of the silo cover.

But they did not have time to open the cover—there was an explosion. A black smoke formed in the bay and water oozed out of the upper part of the silo.

The submarine's physician Igor Kochergin recalls:

"The ship sank in 15 seconds—very rapidly, like a stone. Visibility worsened in my bay, an orange mist appeared, and I felt burning and dryness in my throat—symptoms of poisoning.

"An hour later the first victims were taken out of the bay where the emergency occurred. Their condition was serious: trembling of the hands and legs, a loss of consciousness. We had just managed to give them promedrol injections when we were ordered to abandon the bay. But how could we? The guys were wet, they were slipping out of our hands, the gangway was almost vertical... The respirators were cumbersome. We rolled up the sheets, put them under their arms, and dragged them up that way. As soon as we had that done we were ordered to find the commander of the bay where the accident had occurred. We found him—he was already dead. I immediately set out for the seventh bay—I was told that there were two more people unconscious there. We did everything we could, but alas..."

On orders from the ship's commander, the middle group of tanks of the main ballast were blown.

Several days later the WASHINGTON POST wrote: "Modeling the situation of the accident, Navy specialists came to the conclusion that the submarine's commander and crew deserve high praise for being able to come to the surface of the water and for the actions they took to fight the fire."

The unexpected disaster kept them from observing what is perhaps the most important requirement, the holy of holies of submarine navigation—secrecy.

The Duel With the Reactor

The level of the gas content of certain vitally important bays of the ship exceeded 3,000 times the maximum permissible concentrations. But even under these conditions none of the sailors started looking for the life rafts. At that moment for the commander there was no more important job than to dump the fuel components and pump out the missile silo.

The fight to save the submarine had continued for about 14 hours when the central post received a report of a fire from the sixth bay and of the appearance of dark brown smoke in the fifth bay. But they were unable to start up the drives of the absorbing compensating lattice (PKR) that shut down the reactor. In this case the reactor was considered to be shut down temporarily but it could have started up at any moment of its own accord.

The experts write in extremely restrained terms about this dramatic episode: "In order to ensure the nuclear safety of the reactor, in order to engage its compensating lattice manually, specialists from the combat engineering department were sent to the seventh bay three times."

There were only two of them, these specialists—Seaman Sergey Preminin and his chief, the commander of the hold crew of the propulsion division, Senior Lieutenant Nikolay Belikov.

Belikov went first. With incredible effort the officer managed to lower one of the four lattices. Barely conscious, he had to get out of the radio room. He came out and plunged into the depths of unconsciousness. He came to when they poured water on him. And nearby they were already "packing" into protective gear. The two of them were quickly lowered into the radio room. The terrible fire had gotten worse and the concentration of the toxic gas mixture had also increased, but the sailors were able to lower the second screen.

Preminin became ill. Belikov helped him to get up seven rungs of the ladder, lay the sailor on the metal bilge boards, and went back to the reactor. He finished lowering the third lattice, put the wrench on the fourth one and then started to feel as though he was losing consciousness. Somehow he managed to get to the ladder and through the coaming, no longer paying any attention to the fact that he was banging his head on the bulkhead. He collapsed next to Preminin. Then, helping one another, they made it to the door of the eighth bay. They opened the latch from the other side.

Senior Seaman A. Dolotiy recalls:

"Belokov collapsed. It was horrible to look at him: His eyes were red, they were bursting out of their sockets, his face was lifeless and white..."

Preminin came to and they started to pour water on him. Now that the bay commander had succumbed to heat prostration, he was the only one who could complete the task. Soon the sailor again lowered himself into the smoky, scorching heat of the bay. A little later they heard over the intercom:

"Seaman Preminin reporting. The last lattice has been closed. The reactor has been shut down. There is no discharge. I am moving toward the exit.

On 6 October 1986 the NEW YORK TIMES ran a report on the accident aboard the Soviet submarine. It contained, in particular, a statement from U.S. Secretary of State G. Schultz: "We know there was no radioactive

pollution of the atmosphere. I also assume that they have a way of measuring the level of radioactivity of the water." This same newspaper quoted a similar statement the next day, but this time from a professional military person—Vice Admiral Powell Carter: "We have analyzed air and water samples. They all confirm that there is no radiation."

Preminin knocked on the bulkhead door. Senior Ensign Vasiliy Yezhov immediately pushed on it from the other side but it would not open. Several other men pushed against it—but it would not open. The door was completely stuck to the bulkhead and there was no force in the bay that could move the unyielding steel even one millimeter.

In the main command point they made a decision—to ventilate the bay where the emergency occurred and make the pressure in it the same as the atmosphere. Only the ship's commander could make the decision to unseal the bay. Captain Second Rank Igor Britanov contacted Preminin on the communications system. The sailor had to open the latches of the ventilation system on the starboard corridor.

"All right, I understand the order, I will carry it out," one could hear over the "Kashtan" (communication device). A couple of minutes later at the main command point they heard Preminin's calm voice:

"I cannot open the latch, the stopper pin is stuck..."

And he fell silent. But they continued to call the sailor on the communications system from the central post. Preminin heard them calling but he did not even have the strength to respond. He just feebly knocked on the microphone:

"Knock, knock, knock..."

Then the knocking stopped.

The sailors struggled for 20 whole hours before the ships from the ministry of the Maritime Fleet arrived and began to take some of the exhausted crew from the submarine. The submarine was taken in tow. But the sailors remaining on board the submarine and the emergency crew tried for two more days to save the ship. But the water soon began to penetrate through the main conduits, which had been damaged by the explosion. They could not keep the submarine afloat.

On 6 October 1986 at 1100 Moscow time, 40 hours after the beginning of the accident, when the submarine was lowered into the water to the level of the fairwater plane, the commander left it. And that was on an order from the Navy commander in chief. Only three minutes later, at 1103, the submarine sank into the watery deep.

After the Accident

Chernobyl will remain a symbol of human disaster in the historical memory of humankind. Stamped forever on the reverse side of this symbol will be the courage and

names of the heroes who went to subdue the nuclear fire. But what do we know about our Navy heroes who saved the world from a "Chernobyl" in the Atlantic.

Physician Igor Kochergin had emphysema when he was taken on to the ship that arrived. He was saved from death by the ship's doctor, Gennadiy Novikov. Kochergin recalled: "When we landed in Cuba we were greeted very warmly. Ikarus buses were waiting for us, we received good medical care. When we arrived in Moscow we rode in small PAZ [Pavlov Bus Plant] buses and people were already shouting at us: Shame. And in the North, where the ship was registered, they sent trucks to the port. And they spoke to us almost as though we were criminals..."

The fateful Bermuda has once again lived up to its reputation. Both ships and people continue to be threatened by inexplicable disasters. The only difference is that ships experience disaster when they are in the zone of the Bermuda Triangle, while people experience it outside its geographical boundaries as well.

After a careful investigation of all the circumstances of what happened, the criminal case that was brought was dropped: The prosecutor did not discern elements of a crime in the action of the submarine command. But still at the end of October 1987 the seamen of the Northern Fleet were missing two experienced submarine commanders from among their ranks. With a single order the submarine commander, Captain Second Rank Igor Britanov, and the commander of the engineering department, Captain Second Rank Igor Krasilnikov, were transferred into the reserve under Article 59, Point D (unfit for service). But, as was the custom at that time, the first to be forced into the reserve was the ship's deputy commander for political affairs, Captain Third Rank Yu. Sergeyenko.

Who Is to Blame?

The experts established that the reason for the submarine accident was the "sea water in the silo." Through experimental tests and careful analysis it was proved that this was not the crew's fault but was caused either by technical factors or the effects of some outside forces. There is one version according to which the object our submarine ran into was an American submarine.

The WASHINGTON POST of 5 October 1986: "...American submarine specialists have confirmed that even before Gorbachev told Reagan about what had happened, the United States already knew about the incident on the Soviet submarine of the Yankee-1 design (name according to the NATO classification). Although they did not wish to reveal the details about who was the first to report the accident, it is probable that it came from an American submarine which was tracking the Soviet submarine. This kind of tracking is a common thing..."

What was said above about the American submarine was almost the only thing that appeared in the large newspapers intended for mass readership. But some details leaked into the local press. In particular about the fact that some time in the first half of October 1986 a U.S. Navy nuclear-powered submarine patrolling in the Atlantic was damaged as a result of a collision with an underwater object and returned to its port registry New London (Connecticut) for repair in dry dock. It was pointed out that an inspection revealed damage to the bottom of the bow and the fairing of the hydro-acoustic station.

Here is it appropriate to note that after the explosion our submarine sank under water and the upper conning tower hatch was opened, and the senior assistant ship commander Captain Third Rank S. Vladimirov discovered along the port side from the escape hatch to the stern a double furrow with a metallic shine. Where did it come from? Specialists have still not found a convincing answer to this question. Some assume that this mark was left by the cover that was torn off from the missile silo. Others, giving calculations and based on the laws of physics, are absolutely certain that the fresh mark on the metal, even with the most improbable assumptions, could not have been left by the cover and that this could not have happened without an outside object. Perhaps even a foreign submarine.

U.S. Navy officials refused to deny or confirm the assumption about the participation of an American submarine in the incident.

But it is not even just a matter of a mysterious submarine. Something else is quite obvious: The accident was not the fault of the people manning the submarine. Nonetheless the commander was blamed for not immediately giving the command to open the cover of the missile silo when the emergency signal appeared on the lighted display. In such a situation the instructions said that first one must make sure that the signal was valid and then take measures after that. The thing is that (and this is possibly one of the most important factors in the accident that occurred) because of the imperfect electronic equipment, false signals are given fairly frequently. They have simply become the norm. False signals had been given for several other silos as well. The submarine commander and the other specialists needed time to straighten this out.

So, as usual, the "fall guys" were blamed. The "men at the helm" got off very easy and remained in their cushy jobs.

Three years later there was an accident with the atomic submarine Komsomolets. And much of this was repeated in different situations. And yet the tragedy could have been avoided were it not for the criminal silence about the circumstances of all the preceding accidents involving shortcomings in the designs of the ships and the imperfect support systems.

The world ocean remains an arena of competition even today. It is still cold in the depths of the sea, both literally and figuratively. Submarines continue to be built and their combat capabilities are increasing. And nobody in the world, either here or abroad, can guarantee that there will not be another disaster involving a submarine equipped with atomic bombs. A corroboration of this is the recent collision between our submarine and an American one in the neutral waters of the Barents Sea.

Epilogue

On 23 June 1987 the decree of the Presidium of the USSR Supreme Soviet "On Awarding Orders and Medals to Military Servicemen of the Soviet Army and Navy" was published. On the list was the name of Sergey Preminin, who was posthumously awarded the Order of the Red Star.

The former submarine commander, Igor Britanov, is living in Yekaterinburg. His son Aleksandr, intending to follow in the footsteps of his father and grandfather, who served the homeland under the St. Andrews flag, was forbidden by his mother to even think about serving in the Navy: "I have already had enough trouble with your father."

The submarine's crew was disbanded and dispersed among the various navies and ships. And the ship lies five kilometers down in the Atlantic with the drowned reactor and ballistic missiles which, thank God, have not found their targets in this imperfect world. The sailor Sergey Preminin has also found his eternal rest there.

CIS: REAR SERVICES, SUPPORT ISSUES

Chief of Rear Services on Reforms

92UM1440A Moscow KRASNAYA ZVEZDA in Russian
26 Aug 92 pp 1, 2

[Interview with Major-General Vladimir Timofeyevich Churanov, chief of Rear Services of the Armed Forces of the Russian Federation, by Petr Altunin, KRASNAYA ZVEZDA correspondent; place and date not given: "Rear Services in Conditions of Reform"]

[Text] Vladimir Timofeyevich Churanov was born on 22 October 1945 in the city of Nevinnomyssk, Stavropolskiy Kray. He graduated from the Volsk Higher Military Rear Services School in 1968, the Military Academy of Rear Services and Transportation in 1979, and the Military General Staff Academy in 1987. He has served in the troops in rear services command positions (service chief, deputy division commander for rear services, chief of staff of army rear services, deputy district commander). Recently he was appointed to the position of chief of Rear Services of the Armed Forces of the Russian Federation. He is married and has two children.

[Altunin] Vladimir Timofeyevich, just recently you were appointed chief of Rear Services of the Moscow Military

District and were considered young for such a position. Now you, a major-general, have been promoted to a position which in the recent past was held by marshals and generals of the army... Apparently, this is unusual for you as well as for those around you?

[Churanov] I think we all must get used to the realities of today: there was the USSR—now there is Russia; there was an army of five-six million people, but now by making cuts we will gradually bring it down to one percent of the Russian population, or 1.5 million. How many hundreds of general positions have we cut back recently and how many job categories have been reduced... It seems to me that this is all logical and natural.

[Altunin] I will ask you right away another question that goes along with that. As far as I know, you are the first chief of Rear Services of the Armed Forces who has come from the ranks of the rear services and not from the ranks of district commanders, as has been the practice up to now. How do you yourself view this?

[Churanov] I believe that our past commanders had their strength—an outlook as a military leader making it possible to find a place for rear services on the main direction, primarily in maintaining combat readiness. I, for example, deeply respected and revered Marshal Semen Konstantinovich Kurkotkin—with his front and troop experience, he clearly saw rear services problems. But those chiefs also had a minus side—knowledge of rear services on the whole. And the technology itself, the specifics of our job—this often remained beyond their competence. But, you see, rear services today are not a transport and supply service, but a huge, I would say, industrial complex.

[Altunin] What are your first impressions in the new position?

[Churanov] After taking over the duties, I found myself face to face with many problems which seemed fairly well-known to me. However, I must admit that their acuteness and scale were unexpected. You see, today the situation with supplying troops and fleet forces, especially with fuel, clothing and related gear, and food, despite the steps being taken, continues to worsen. This is fraught with serious consequences. But what can be done? I don't think I should complain or dramatize things. We live in conditions of a developing, albeit not as one would like, market and we leaders ourselves must actively, without waiting for the economy to stabilize, and decisively introduce economic methods of management and establish direct ties with suppliers locally. Only this approach, I am firmly convinced, will make it possible to resolve the supply problems we run into every year.

[Altunin] Please tell us a little about the new structure of the Rear Services of the Armed Forces, the new title of the position, and the subordination.

[Churanov] Development of a structure of the Russian Armed Forces and their Rear Services for the next few years and the more distant future has already been approved. The appearance of the Rear Services is already clear. As a part of the Armed Forces of the Russian Federation, it will represent a relatively independent system and be divided into interrelated subsystems (echelons). At the center is the chief of Rear Services of the Armed Forces with his staff. He is now subordinate to the deputy minister of defense. In turn, the Rear Services Headquarters and the central directorates, representing the corresponding services, are subordinate to the chief. Rear Services bodies will be created in the strategic, operational, and troop echelons. I want to note that the structure will be on a combined-arms basis according to the principle of combat units, with the attachment of rear services subunits of high mobility and modular interchangeability (particularly for mobile forces) and equipped with highly productive and standardized rear services equipment. The influence of the staff and directorates of the rear services on the rear services structures of the types of troops will be maximized.

We believe that the planned measures for organizational development of the Rear Services of the Armed Forces of the Russian Federation will be basically organizational in nature and will not require additional financing.

[Altunin] What problem for the Rear Services would you single out as the most important?

[Churanov] Actually, it is difficult to do that, but we have been troubled by some "hot spots," difficulties in organizing logistic support of troops (forces) stationed outside of Russia and taken from under its jurisdiction. And these difficulties are growing. We must exert maximum efforts to overcome them.

Finally, this problem comes up against the financing deficit. Suppliers continue to refuse to fulfill their obligations for deliveries of material resources in the full amount.

In connection with the elimination of the union ministries, which at one time were responsible for placing military orders with industry, the Ministry of Defense of the Russian Federation is forced today to search for and set up direct contacts with thousands of enterprises throughout our country.

True, many enterprises are ready to fulfill our orders, but they cannot do so due to the lack of raw materials. This particularly concerns suppliers of cloth for making uniforms.

[Altunin] What is the situation with the feeding of servicemen?

[Churanov] I must say that despite the overall worsening of the situation with certain types of foodstuffs on a country-wide scale, the Government of the Russian

Federation and the Ministry of Defense have found a way not to decrease earlier established supply norms.

At the same time, it is increasingly difficult to resolve problems associated with improving the assortment of products. The recently introduced system of paying in advance for distribution of individual types of foodstuffs has exacerbated the already difficult problem with deliveries, particularly seasonal products.

We see the solution to this problem in granting certain benefits and other economic incentives to enterprises distributing products for the needs of the Ministry of Defense, food in particular, as is practiced in all developed countries. In turn, we will take all the steps necessary to prevent breakdowns in organizing feeding in the armed forces. We also have a permanent reserve—military sovkhozes and subsidiary farms. The minister of defense of Russia demands that we continue to develop and improve them in order by the end of 1995 to supply the Army and Navy with meat for 4.5 months and potatoes for six months. This will make it possible to reduce considerably the receipt of food products from the national economy.

[Altunin] What can you say today about uniform changes? Recently there have been some sudden changes and zigzags taking place concerning this...

[Churanov] Yes, there was inconsistency here. As far as I know, the Rear Services were not at fault. The top command changed, and everyone had their own opinions and partialities on this account. Perhaps the main thing is that the matter ran up against the economy. Now the optimum variant has been found—with emphasis on such uniform qualities as its reliability and ease of wear, esthetics and standardization of clothing items. A system of badges of distinction on the uniform of servicemen has been developed, taking into account the new Russian symbols, which in our opinion should increase their sense of pride in belonging to the Armed Forces of Russia.

[Altunin] Can you tell us briefly about supplying the armed forces with fuel?

[Churanov] The situation here is also extremely complex. Suffice it to say that for 1992 the Armed Forces of the Russian Federation have been allocated 70 percent of their energy needs, and this is given the fact that nearly half of the fuel depots remained on the territory of independent states of the former Soviet Union.

The troops taken under the jurisdiction of Russia and remaining outside its borders have ended up in a particularly difficult situation. This is caused by a number of reasons, above all by the governments of the independent states of the former USSR instituting licensing of deliveries on their territory. They almost cannot purchase petroleum products locally due to their very high cost and also the shortage of tank cars allocated by the Ministry of Railroads for shipping the fuel to the troops.

The tank cars that were there before, it is now being said, have been privatized by local authorities and are not going to be returned.

In these conditions, the fuel service is doing everything it can to supply fuel to the troops: in some places by redistribution of resources among districts and fleets, and sometimes even by taking from emergency reserves and later replacing them. So, conserving fuel is a most important requirement today.

[Altunin] A traditional question. What would you like to say and to whom through KRASNAYA ZVEZDA?

[Churanov] Taking advantage of the opportunity, I would ask that the ministries and departments "feeding" the armed forces, suppliers, and, above all, the ministries of economics, finance, and railroads of the Russian Federation have a deeper understanding of the needs of the Army and Navy and provide more material and financial assets so that the troops and fleet forces can in turn engage in combat training, maintain a high level of combat and mobilization readiness, and not look for ways and methods of "surviving" in conditions of an economic crisis.

I also would like to appeal to our workers in the Rear Services: the work to supply our troops with everything necessary is as worthwhile as it is difficult. And at the stage we all must show maximum patience and perseverance. Fewer references to "objective" difficulties and more initiative, efficiency, inventiveness, and, where necessary, selflessness—this is what is required today to accomplish the tasks of logistic support of the Army and Navy.

Foreign Construction of Apartments for Russian Officers

92UM1435A Moscow ROSSIYSKAYA GAZETA
in Russian 2 Sep 92 p 2

[Article by Leonid Skoptsov under the rubric "The Army": "German Apartments for Russian Officers"]

[Text] Two years ago the German government allocated 7.8 billion marks for the construction of housing for the families of Soviet officers leaving unified Germany. So that the "immigrants" would think kindly of Germany, an average of around 150,000 marks was allocated for each apartment. This is a large amount even by European standards. It was planned to build 36,000 apartments at 38 military posts (plus four housing-construction combines).

In fact, there is every indication that even more apartments will be built. The contracts are being put up for bid, as a result of which the prices of services from the construction companies have dropped. Contracts have already been signed for the construction of 13 posts (seven in Byelarus, four in Russia and two in Ukraine) involving around 14,000 apartments. Six thousand of them have already been released.

Hard currency works in any economy, even one as disorganized as ours, and there are therefore more than enough seekers of the money provided by the German tax-payers. The interesting thing is that construction giants from West Germany have won only three bids, the same as the builders from that former outpost of socialism, East Germany. Furthermore, the lead held by German companies is being seriously challenged by competitors from Turkey. They have won three bids on their own and another as part of a consortium with the Finns. The Turkish company Enka (two winning bids) have set an All-Union record for housing construction by building a housing complex of 725 apartments, with the entire social and personal-service infrastructure, from scratch, at Borisov in Byelarus in just six months. The Finns and the Austrians have won one bid each. The list of winners does not include Yugoslav or Polish firms, which had a good reputation in the former USSR.

Unfortunately, the list of contractors also does not and will not include any of our own builders. There were many who would have liked to earn hard currency at home, but none of them was able to meet the rigid requirements set for a contracting company. The most the Byelarusians, Ukrainians or Russians can hope for is to be subcontractors for more successful colleagues from far-off countries.

In the first place, this is hard-currency earnings; in the second, it provides good schooling. And the fact that it is not impossible is demonstrated by the successes of our recent comrades-in-arms in the socialist camp, the East Germans. The East German Elbe Bau has already won two bids, for example. HMB, another company from East Germany is confidently bidding on the construction of 1,910 apartments (the contract is estimated to be worth 160-170 million marks).

Not long ago HMB won the bidding and built Germany's largest trade center, with an area of 30 hectares, but its hopes of success in Russia are based not on prestigious Western projects at all. HMB has operated in Russia for

15 years now, building and continuing to build for the gas industry. By a lucky coincidence its main construction base was located precisely at Chaykovskiy, 6 kilometers from a future military post.

This is how competitive advantages are produced. Any other company would need three-four months to mobilize, but everything is ready for HMB: from construction-materials quarries to housing for the workers. The East Germans are prepared to release the first apartments as early as June of next year, but all the others will have to wait for the spring warming to begin the job. Once again, HMB has a partner of many years in Perm Oblast, Votkinskgasstroy, and then half of the workers in the company itself are Russian citizens.

While sincerely wishing our former colleagues in the socialist camp success, however, we cannot ignore the matter of the competitiveness of our builders. After all, German housing for Soviet officers is not the first and, one has to assume, not the last hard-currency contract on our territory. It is therefore upsetting that here at home, where of course even the walls are supposed to help, hard currency continues to flow through our fingers. And our hopes of increasing our competitiveness evaporate along with the hard currency, since there is nothing with which to acquire the modern construction equipment and the materials.

It would therefore be prudent to follow the example of other countries which want to develop and reserve at least part of a contract by law for our own builders. The requirements with respect to quality and construction rates would remain at the world level, but only our companies would compete in the bidding for that part of a contract. If they could not meet the requirements, we would invite foreigners to bid.

This route for developing our own construction industry is slow, of course, but it is also sure. If we take this route, the day will inevitably come when Russian builders will win over Turkish, German and any other competitors in far-off countries.

INTERREGIONAL MILITARY ISSUES

Sailors Under Pressure to Renounce Loyalty Oath

92UM1357B Kiev NARODNAYA ARMIYA in Russian
29 Jul 92 p 1

[Article by NARODNAYA ARMIYA Correspondent Lieutenant Colonel Vladimir Voronkov, under the rubric: "The NARODNAYA ARMIYA Correspondents' Offices in the Black Sea Fleet and in the Crimea Report": "From Whom Are the Sailors Running?"]

[Text] When you drive into Sevastopol and you see the ships quietly standing at the piers in quiet South Bay, you instinctively catch yourself thinking that there should also be that same measured, calm life on them. A life inherent to military sailors, strictly in accordance with maritime laws, where people respect each other, they take the opinion of each person into account, and they value adherence to principle, honesty, and openness. You think that until you come into contact with facts of the opposite characteristic. An atmosphere of goodwill and mutual respect does not reign on each ship and sailors do not understand each other everywhere. Conflicts are beginning and suspicion and mistrust are being manifested. What is the cause of such cataclysms?

The taking of the oath of allegiance to the people of Ukraine by many officers, warrant officers, and sailors has served as a bone of contention. And then, as they say, a witch hunt begins, first on one ship and then on another. Commanders who have taken the oath are literally being banished to the shore. As they say, you don't have to go far to find examples. I will name ocean minesweeper-signal ship Commander Captain 3rd Rank Timur Suleymanov and BT-126 Coastal Minesweeper Commander Oleg Grebenyuk. They became objectionable for the Black Sea Fleet command authorities for that reason alone... They designated other officers to replace them, officers who adhere to another point of view. It turns out that in the Black Sea Fleet they show mercy to some people and punish other people for different positions and views. But is that just? To what degree are the punitive actions being reflected on the mood of their subordinates and do they feel comfortable after the purge of the command personnel? The sailors with whom I had the opportunity to speak unambiguously expressed themselves: they are uncomfortable. I will list their names: Senior Seaman Mikhail Gumenyuk and Seamen Pavel Kucheruk, Aleksandr Yermak, Ruslan Boyko and Yevgeniy Kasyuga.

This is why people have found themselves in that situation. A month ago, they along with their Commander Captain 3rd Rank Suleymanov took the oath of allegiance to the people of Ukraine. The command authorities rapidly settled scores with the officers they objected to, but they decided to delay dealing with the other personnel.

"Literally every day," Senior Seaman Gumenyuk said, "Battalion Commander Captain 2nd Rank Spalek

invited us to his office to talk and suggested every possible way to refuse to take the oath. He said that Black Sea Fleet seamen could only swear allegiance to the CIS and not to Ukraine. These arguments seemed to be quite strange to me and to my comrades. How can we refuse to take an oath to our own Homeland? We—are children of Ukraine, it raised us, it is our mother. We did not betray our word."

"How were you able to function on the ship after this criticism?"

"It was very difficult," Seamen Yermak entered the conversation. "At times we even felt humiliated."

"Just how was the humiliation with regard to you manifested?"

"They essentially removed us from performing our duties and stopped trusting us," continued Aleksandr. "They used us primarily as slave labor: we performed various cleanups on the ship, they assigned us to the galley, etc. If we attempted to be stubborn, our superiors 'settled scores' with us."

Naturally, the seamen could not reconcile themselves to such humiliation. Neither military nor purely human honor would permit that. They decided... to run away from the unfriendly ship and turn to the Ukrainian Navy for assistance. They selected an appropriate moment to flee when one of them was on watch and they went to shore all together on the night of 22-23 July. Soon, all of the seamen were standing before the Ukrainian Navy's operations duty officer.

"How were you greeted here and what did they promise with regard to future service?"

"They treated us very respectfully, listened attentively and said that we will serve in our specialties on an escort vessel," Senior Seaman Gumenyuk answered for all. "We will serve the people of Ukraine because it is befitting."

What are the seamen running away from? From those who do not want to understand them, share their thoughts and feelings, and who are attempting to humiliate their military and human dignity.

Incidentally, these cases are not the only ones. Officers and warrant officers, and seamen along with them, are leaving ships while protesting against injustice and a biased attitude. That is what coastal minesweeper Deputy Commander Senior Lieutenant Teymuraz Lordkipanidze, and two warrant officers and 12 seamen along with him, did because they did not agree with the command authorities' decision to remove the ship's commander from his post.

The Ukrainian Navy is being reinforced with every passing day, and regardless of nationality: Captain 3rd Rank Timur Suleymanov, Captain-Lieutenant Sergey Novikov, Senior Lieutenant Teymuraz Lordkipanidze... I think their names speak for themselves. I think that

Black Sea Fleet Commander Admiral Igor Kasatonov was defending in vain his ironic sentence that there is no Ukrainian Navy at a 22 July press conference. He said that there is only a sovkhos, a newspaper, and a warehouse.

"Our navy is in the formative stage," Ukrainian Navy Commander Rear Admiral Boris Kozhin commented on that statement. "We have not only a newspaper. A junior specialists school, a special purpose unit, and officers courses are operating, and we are selecting a crew for the ship 'Slavutin'... Right now it is important to resolve the Black Sea Fleet issue through political means.

Officers Score 7th Army Commander, Allege Armenian Atrocities

Charges by Unnamed Officers

92US0787A Moscow DEN in Russian
No 32, 9-15 Aug 92 pp 1-2

[Article signed by unidentified officers of the 7th Guards Army: "The Defeat of the 7th Guards"]

[Text] Russian helicopters have struck at Azerbaijan, struck at the territory of a foreign state with which Russia is not in a state of war. This was done under circumstances in which the events occurring in Nagorno-Karabakh Autonomous Oblast have not affected and currently do not affect Russia's interests or the system of Russian treaty obligations.

After all that has been said about Afghanistan, what about the lives of Russian soldiers and officers who are fighting as mercenaries for both sides as a result of their own poverty? Refugees are entering Russia from both republics. Both republics have ruling regimes that are openly nationalistic, pro-Western and anti-Russian, as well as strong anti-Russian sentiments among the populace.

An Azerbaijani offensive was halted by forces of the 7th Guards Army. The threat that Azerbaijan will seize all of Karabakh has been eliminated. Maj. Gen. Reut, commander of the 7th Guards Army, has flown to Moscow to receive the rank of lieutenant general from B. Yeltsin and G. Starovoytova.

Before that he got a present from the Armenian minister of defense: a Toyota diesel jeep previously used by the ministry, white with Italian license plates. He is not ashamed even now to travel openly in it throughout the republic on visits to Russian military units, without even changing the license plates. His driver is an Armenian on extended military duty who regularly buys his relatives new KamAZ trucks from the army at the price normally charged for surplus and damaged equipment. A symbiosis...

The order to strike at Azerbaijan was carried out by a Yerevan-based helicopter squadron from the 7th Guards Army, an army which the Armenians have been jeering at for several years now. Two weapons officers from the

squadron—Senior Lt. Devaykin and Lt. Col. Parkhotik—were recruited to carry out the raid on Azerbaijan on official orders and in Armenia's interests. The other pilots could not be convinced to do so, even when faced with the threat of reprisals against their families and punishment for failure to carry out a combat order issued by the commander of the 7th Guard Army, at that time Maj. Gen. Reut.

Taking part in the raid on Azerbaijan, or more precisely on the city of Agdam, were helicopters transferred to Yerevan on 17 January from the Tskhinvali Helicopter Regiment after Armenian fighters had shoved and kicked Gen. Patrikeyev, Transcaucasus Military District commander, and Gen. Meshchervkov, at the time 7th Guards Army commander, into their cars for a "talk." The identification numbers 39, 40, 41 and 45 were covered over with graphite paint.

The helicopters were piloted by Col. Mukhamedzhanov, former commander of the Tskhinvali Helicopter Regiment and presently inspector in the Army Aviation Directorate at Transcaucasus Military District Headquarters, another inspector from the same directorate, an officer named Kapralov and an unidentified major from a helicopter base in Telavi (Georgia).

One of the inspectors of the Army Aviation Directorate of the Transcaucasus Military District is even today still earning money on the side by helping train Armenian pilots who carry out raids on Azerbaijan, though he is still serving in the Russian Army.

Originally the order to strike at Azerbaijan was received by the Tskhinvali Helicopter Regiment, the pilots of which unanimously refused to take part in the dirty deed. Then pilots from the former Nakhichevan Helicopter Squadron were transferred to Yerevan, in hopes that their wounded pride over the way they had been abused by Aliyev's fighters would prevail. Yet those pilots also refused, pretending that they did not like the price being offered.

The helicopters that took off from the military runway at Yerevan's Eribuni Airport were seen off by an entire military and governmental delegation comprised as follows: Levon Ter-Petrosyan, President of Armenia and his escort of about 15 puny, greasy boys armed with Colts, Stechkins and Makarovs; Col. Abramyan (now a colonel in the Armenian Army), commander of military aviation (formerly a regimental commander in the Ukraine); and plump, short, fingernail-drumming Gen. Reut, with a retinue of staff officers and a staff general to boot.

Gen. Reut "rented" the Armenians Mi-24P helicopters from the Yerevan Squadron with the identification numbers 50, 51, 52 and 55. These were the squadron's best and newest helicopters. He also arranged for several pilots from the 7th Guard Army's helicopter squadron to take part in the fighting on the side of the Armenians. Money and threats of reprisals against families were

employed. Here are some of those who participated: Col. Gulyayev, who was shot down by the Armenians while returning from the raid on Azerbaijani territory and died inside Armenian territory; Senior Lt. Tereshchenko, a weapons officer who died along with him; pilot Capt. Gavriyuk and weapons officer Senior Lt. Devaykin; pilot Maj. Kalenov and weapons operator Lt. Svetlichnyy. After the deaths of Gulyayev and Tereshchenko on 13 June the rest refused to fly and withdrew into a deep alcoholic binge.

Attempting to prevent the criminal conspiracy between Gen. Reut and the Armenian fighters that even then was fraught with senseless losses of Russian pilots' lives and dishonor for Russia, Senior Lt. Khvostyuk put the helicopters out of commission by unbalancing their autopilots. But a Judas was found and Khvostyuk was taken into custody by the Armenians just before his departure for Belorussia, and without any objections on the part of Gen. Reut. The officer was tortured and forced to reset the autopilots under a real threat of death.

Here is what happened to the "rented" helicopters: No 50 carried Gulyayev and Tereshchenko to their deaths; No 51 was shot down by Armenian pilots, crashed and burned; No 52 received rudder damage from ground fire and made a forced landing in Armenia's Gorisskiy Rayon, from where it was removed by the Azerbaijanis and repaired at a military airfield in Azerbaijan at the town of Kala near Baku, and is currently being used in military operations by Azerbaijani fighters; No 55 returned to base and still retains its former identification marks.

In order to conceal the state crimes that had been committed, the decision was made to transfer the long-suffering Yerevan squadron to the Armenians immediately. That was also done in order to prevent the remnants of the 7th Guards Army from having their own air bridge if it became necessary to carry out massive hostage taking among Russian officers and members of their families. Yeltsin and the Armenians have learned their lesson from the events that occurred in the 14th Army, and are aware of the possibility that army officers might mutiny against the traitor Reut.

In the entire 7th Guards Army only two people are pushing for an accelerated transfer to the Armenians of the army's divisions and, at a particularly rapid pace (by 15 August), its aircraft: Gen. Reut and Col. Tretyakov, chief of operations. They both live in Yerevan without their families. They are both counting on jobs in Yeltsin's army... Never mind their own army...

The Armenians are continuously killing Russian soldiers within Armenian territory, but information about those incidents is being concealed from Russians in Russia through the efforts of the Armenian lobby in Moscow.

This time the Armenians have been killing Russian military personnel because they attempted to remove from Armenia secret space communications stations. Armenia does not need stations like that; it does not

have its own communications satellites, and the stations themselves are only compatible with Russian military satellites. But as a result of the Armenians' political calculations those stations were slated to be turned over to the United States together with a package of other intelligence-related and political services within the territory of the CIS in exchange for a promise of political support.

After this murder and after several military personnel were taken prisoner, units of the 7th Guards Army were put in a state of alert and began to drive Armenian fighters out of their residential areas and out of areas where their units were deployed. However, Gen. Reut, who flew in from Moscow at once, rescinded both the state of alert and the additional security measures.

The Armenian Information Agency has distributed a slander statement declaring that those who were killed were drunk, were hauling stolen equipment away to sell it and had run over and killed several children, and that several members of "law enforcement organs" were killed in a shootout with them. Armenian newspapers began publishing interviews with the Armenian fighters who shot the airborne troops point-blank, in which they confirmed the Armenian version, describing "bottles of vodka in the pockets of those who were killed..."

When demands were made that the bodies of the "dead children and law enforcement officers" be presented, none were found to exist. Analysis of the weapons carried by the murdered airborne troops, which according to the murderers had been the first to open fire and did not cease fire when requested by the Armenians to do so, clearly indicated that the airborne troops did not fire a single round from those weapons. The only witness—an Armenian—said when questioned immediately after the event that he had heard the command given in Armenian to "leave none alive" and had seen wounded airborne troops continue to be beaten.

Right now the Armenians are attempting to buy off the parents of those who were killed, Russian investigators and Russian generals and politicians, to falsify the physical evidence and to "coach" witnesses. Gen. Reut has already attempted to convince the officers of the 7th Guards Army that things happened the way the Armenian fighters say they did.

The Armenian press has accused the Armenian Procuracy of concealing criminals of which it is already aware—those who attacked a USSR internal troops patrol at the Yerevan train station.

The patrol had been guarding Armenian passengers on a train traveling through Azerbaijani territory. The head of the patrol, a Russian lieutenant, was killed by a pistol shot in the back fired from point-blank range. He had refused to order his soldiers to lay down their arms. In the ensuing shootout several of the bandits were killed or wounded, and several soldiers were wounded.

Wounded bandits who were captured turned out to be members of the then-illegal military units of the Armenian Liberation Movement party, which brought to power Levon Ter-Petrosyan, current President of Armenia.

At the time the party was immediately accused of the crime committed by its fighters on instructions from its leaders, as well as of carrying out a massive attack on a USSR Ministry of Internal Affairs regiment in Yerevan at the same time. Borne on a campaign of slander, hatred and unbridled Russophobia, propaganda for ethnic exclusivity and anti-communism and promises of immediate Western aid, Levon Ter-Petrosyan came to power along with his party, the Armenian Liberation Movement.

The Armenian Procuracy, as has been convincingly stated in both the Armenian opposition press and the anti-Russian press, did not expose the Armenian Liberation Movement, closed the case and let lies about the Russian victims continue to circulate unimpeded. The Armenian dead became heroes of the struggle for independence from the Russians and were buried in a place of honor. At the train station there stands a monument in their honor with candles and flowers around it. All this was silently approved by Yeltsin and the Russian and Western "democratic figures" who arrive in Armenia on a regular basis to "run the show."

The procuracy of the 7th Guards Army is renowned for the fact that most of those who serve there are Armenians, it is headed by an Armenian, Col. Vardanyan, and has not offended a single Armenian over the past several years. In view of "Armenia's difficult situation."

The general from the Russian Procuracy currently overseeing the investigation is also famed for the fact that Col. Vardanyan is enthusiastically proclaiming his "cordial" relations with him.

The Armenian mass media are now ardently debating the idea of a possible outrage against all moral standards for the sake of the survival of their "ancient people." At the same time the leaders of Armenian military units are stating long-standing plans for massive hostage-taking among the personnel of the 7th Guards Army and members of their families. The goal is to obtain military shipments from Russia and for Russia to take part in military operations on their side.

Gen. Reut is well aware of the Armenians' unique "apartment" system for recruiting Armenian Army officers: the Armenian Government directs any Russian officer demobilized in Armenia to give up his apartment and go to the bottom of the Yerevan Ispolkom's housing waiting list. Anyone who wants to stay in Armenia and keep their apartment must join the rolls of the Armenian Army. Anyone who leaves may be paid a pitiful amount of "compensation" for their housing or simply have it seized by force and given to an "Armenian frontline veteran."

All the apartments belonging to officers of the 7th Guards Army have already been promised to Armenian fighters and Armenian officers from Russia, in addition to the ones they are already privatizing in Russia on the basis of a Yeltsin ukase.

The doors of retired Russian officers, Russian officers' widows and sometimes simply Russians are even now being broken down by new Armenian "tenants" with court orders in their hands. And often with weapons as well.

The Armenians have taken away all the 7th Guards Army's fuel and sold it. The understaffing of officers and soldiers has reached 90 percent, and the economic situation in Armenia makes officers impoverished. Many officers are afraid of being killed in Armenia or being deprived of the remnants of their property during the shameful evacuation of Armenia that is being commanded by Boris Yeltsin.

Over the past year individual army units have repeatedly mutinied and set off to fight their way back to Russia, while officers' assemblies have repeatedly appealed to the "democratic" press and the "democratic" executive authority.

The measures taken by Yeltsin in response were a defense agreement with Armenia plus feigned concern for the officers and soldiers. After which five airborne troops were shot dead near Leninakan. The commander responsible for that was the Armenian deputy minister of defense, who is currently receiving weapons from Reut on orders from the president of Russia.

How many young Russian men are going to be killed before the president of Russia is able to satisfy the growing military appetites of his democratic Armenian adopted children? For the five airborne troops who were killed the Armenians received from Yeltsin's hands a rifle division and a fully-equipped helicopter squadron.

Now the Armenia-Yeltsin plan for so-called "military reorganization" is being implemented: Russia is transferring all the 7th Guard Army's weapons to the Armenian fighters, who will be left holding one Russia division in Leninakan as hostages under the pretext of "a CIS division for defense of the CIS border." The Armenians need that division to put pressure on Russia and obtain the following advantages:

- all necessary supplies for their national army from Russia at bargain prices;
- use of the weapons and military equipment of that division and the materiel and supplies shipped to it in military operations against Azerbaijan, and also to enrich mafia gangs. That is currently being done at the 7th Army's base through bribery and blackmail. Expenditures are being written off as "military training of Russian troops";
- a source of cheap air and rail transportation to Armenia at the expense of the Russian Army;

—a guarantee of freedom for Armenia's "new" and "old" diaspora to maneuver inside Russia for the purpose of ensuring success in the process of Armenian self-determination in Rostov Oblast, Stavropol Kray and Krasnodar Kray and establishment of Armenian political and armed structures. The goal of that process is to create monoethnic Armenian state units in those areas.

Russian troops are being destroyed according to plan.

In Russia Armenians are spreading the myth about themselves as an ancient and civilized people by telling tales about the barbarism of the Azerbaijanis, who in fact do commit and historically have always been inclined to commit particularly refined acts of barbarism.

However, the Armenians are responsible for their own vile, savage and barbaric acts.

Recently it has become fashionable among them, who consider themselves Christians, to offer up human sacrifices on the graves of those who have been killed in the Karabakh war. This is done before a crowd of fellow villagers, women and children. The bound prisoner is laid out on a grave, then his eyes are plucked out, his tongue cut out, his genitals cut off and his throat slit. The victim's blood flows over the grave. Those watching loudly express their approval of this.

There have been cases of these sacrifices being made by public burnings of prisoners or hostages on the squares of fairly large Armenian cities.

What can Russian officers and their families in Armenia expect?

Armenia was supposed to resolve absolutely all its problems by performing the function of a Western errand boy within the territories which comprised the USSR at the moment these plans were conceived. And it was supposed to aid those who also claim the role of "cultured and enterprising nations."

The Azerbaijani were unwelcome in that game, since behind them one can clearly see Turkey and Iran with their own ambitions to exploit Russians and Central Asian peoples through realization of their pan-Turkic and pan-Islamic plans. But that quantity of "chosen ones" might lack sufficient "mass." For the Armenians an alliance and conspiracy is promising only with those Azerbaijanis who are oriented primarily toward exploitation of purely Azerbaijani natural and human resources, and that means primarily the mafia structure operated by Gaydar Aliyev and forces under his control. The government of Armenia and the anti-government Daknashtutyun Party have long been secretly making friends with them.

Plans directed against Russians have been carried out since the formation of the "Karabakh committee," the predecessor of the Armenian Liberation Movement.

Armenians are not crazy, and they are not fools. In this particular historical period they have bet on a whole system of foreign intervention and influence, on internal Russian treason and corruption, and on Russians' goodness and kindheartedness.

A war is being fought, and the 7th Guards Army has already perished in that war, as the Transcaucasus Military District will also perish. Russia faces the possibility of loss of territory, collapse, mass migrations and massive numbers of victims among its own citizens—a prospect which faces any state whose army has been defeated and destroyed.

In this case the victors will acquire new territories and resources and will begin controlling and directing the vanquished.

In Russia's present-day history the first to fall were the border armies and the 7th Guards Army... Eternal memory. Amen.

At Zvartnots Airport in Yerevan Armenian fighters and special military unit members, smirking openly, rifle through the possessions of departing soldiers and officers, taking for themselves anything that catches their fancy. In the governmental section of that airport one constantly sees small, sleek executive aircraft from America, France and other Western countries. Their passengers are accompanied, like sheep and their shepherds, by representatives of this "very old, cultured and long-suffering people," who exude an ingratiating air and look satisfied with their life and their prospects. Military transport aircraft, still on the books of the Russian Army but already sold by Yeltsin and Shaposhnikov into private hands, bring in from Russia an endless stream of everything that is required for the further flourishing of this "great nation" on Russian bones, blood and sweat.

Three-quarters of the prostitutes in Yerevan's houses of ill repute are Russian girls. A majority of them were lured there with deception or simply kidnapped by force not only by Armenians, but also by Chechens, Georgians and Azerbaijanis. Then they are sold and resold. The most expensive of all are only seven or eight years old. They cannot return to Russia; they have no future. The Armenians say that, and their newspapers write it, citing high-ranking Ministry of Internal Affairs personnel.

Can Russia arise and once again emerge victorious at this Battle of Kulikovo? Or will it perish with a "democratic" hood on its head, Yeltsin's heart-rending speeches in its ears and the sand of total betrayal in its eyes?

[Signed] Officers of the 7th Guards Army who are responsible for every word and are willing to stand before any tribunal

General Reut Response

92US0787B Moscow *LITERATURNAYA GAZETA*
in Russian No 36, 2 Sep 92 p 2

[Article by Iosif Verdiyian: "Anonymous, But at Someone's Bidding: DEN Spreading Lies Again..."]

[Text] We have long been accustomed to lies and disinformation in coverage of the events in Nagorno-Karabakh. However, an article which appeared in the weekly DEN, 9-15 August issue, outraged even some people who have seen quite a few things in their day. The article was titled "The Defeat of the 7th Guards." It is a poor-quality political propaganda piece signed on behalf of officers of the 7th Guards Army deployed in Armenia. Essentially it is an anonymous letter written in someone's name, but with no name given.

Just three quotes from the article.

First quote: "Recently it has become fashionable among them, who consider themselves Christians (reference here is to the Armenians—I. V.), to offer up human sacrifices on the graves of those who have been killed in the Karabakh war. This is done before a crowd of fellow villagers, women and children. The bound prisoner is laid out on a grave, then his eyes are plucked out, his tongue cut out, his genitals cut off and his throat slit. The victim's blood flows over the grave. Those watching loudly express their approval of this."

"There have been cases of these sacrifices being made by public burnings of prisoners or hostages on the squares of fairly large Armenian cities."

Second quote: "For the Armenians an alliance and conspiracy is promising only with those Azerbaijanis who are oriented primarily toward exploitation of purely Azerbaijani natural and human resources, and that means primarily the mafia structure operated by Gaydar Aliyev and forces under his control. The government of Armenia and the anti-government Daknashtsutyun Party have long been secretly making friends with them."

And, finally, the third quote: "Three-quarters of the prostitutes in Yerevan's houses of ill repute are Russian girls. A majority of them were lured with deception or simply kidnapped by force not only by Armenians, but also by Chechens, Georgians and Azerbaijanis. Then they are sold and resold. The most expensive of all are only seven or eight years old. They cannot return to Russia; they have no future."

The public is of the opinion that Azerbaijani circles are behind all this.

What is hidden behind this anonymous letter? And what was the reaction to it by the officers of the 7th Guards Army and its commanders? The following response is from its commander, Lt. Gen. Fedor Mikhaylovich Reut:

"The officers of the staff, army directorate and units are outraged by the fact that this article was written in the name of all our officers, of whom there are over 5,000. Such things should not be published anonymously. There should be some specific individual willing to take responsibility for the content of the article, for its insulting attacks, twisting of the facts, falsification and attempt to drive a wedge between our peoples."

"Just look at how the article presents the fact that a portion of our equipment, arms and munitions are being transferred to the Republic of Armenia so that it can create its own armed forces. Yet the basis for that transfer is a mutual agreement on collective security concluded between Armenia and the Russian Federation."

"Naturally one must assume that the article was in fact written by someone among us, because whoever wrote the article was in possession of full information concerning the transfer of arms. But I am certain that they by no means represent the best portion of our officers."

"A decision has been made to send to the editorial staff our representative, Maj. Yu. Budarin, for the purpose of discovering who wrote the article. Subsequently we will take measures, up to and including prosecution of this slanderer."

"I must say that this is not the first such article in the same newspaper. On 3 May 1992 the newspaper DEN published another article on the same subject, also anonymously."

Aims of Ukrainian Military Policy, Military Relations With Eastern Europe

92UM1357D Kiev *NARODNAYA ARMIYA* in Russian
29 Jul 92 p 2

[Article by Aleksandr Goncharko, Oleg Bodruk, and Eduard Lisitsyn: "Possible Paths to Ensure Ukraine's National Security"]

[Text] After the publication of the second article on national security issues, responses began to arrive that were addressed to the *NARODNAYA ARMIYA* editorial staff which, along with a positive assessment of the theoretical and professional level of the published articles, state that the authors' position in their assessment of Russian expansionism could result in the incitement of tension between Ukraine and Russia.

While speaking about Russian expansionism, the authors had in mind the generally recognized (also including in Russia) phenomenon that has deep historical and social roots. Even right now, recurrences of imperial thinking are occurring not only at the level of scientific and analytical developments of Russian institutes and centers but also in the statements and actions of Russian political, state and military figures (S. Baburin, V. Lukin, A. Lebed, A. Rutskoy, and others). So, less than a month ago Russian parliament group Leader S. Baburin officially stated to

Ukrainian Ambassador to Russia V. Krzhizhanovskiy literally the following: "Either Ukraine is once again reunited with Russia, or—war".

Russian Vice President A. Rutskoy's provocative acts in the Crimea and Moldova are well known. Already after conducting a meeting in Dagomys, 14th Army Commander Major-General A. Lebed accused the president of a sovereign state of organizing a fascist state, the leaders of which, we need to understand, headed by the president, "must take the appropriate place at the pole." Former Russian Parliamentary Commission for International Affairs and Foreign Economic Relations Chairman and currently Russian Ambassador to the U.S. V. Lukin submitted cynical recommendations to the parliament and president of Russia to organize military-political and economic blackmail of Ukraine.

That is why the leaders of the sovereign states of the former USSR (E. Shevardnadze and M. Snegur) and the leaders of the parliaments of the Baltic states are frankly and unambiguously accusing Russia of conducting an imperial policy.

In that regard, the authors, while being involved with creative analysis of the alternative threats to Ukrainian national security, had to consider that phenomenon that is known throughout the world under the name of "Russian expansionism". In a more general context, it does not cause doubt (and Russian democrats themselves admit this) that the manifestation of imperial expansionism presents a serious threat not only and not so much to Ukraine, Moldova, Georgia, and the Baltic states, as to democratic Russia itself and to the processes of its revival and emergence on the main path of development of civilization.

THAT IS THE UNITED POSITION OF THE ENTIRE AUTHOR'S COLLECTIVE.

At the same time, the authors' opinions do not coincide in everything. So, they were unable to find a common point of view while analyzing the responses to the articles on SBU [Ukrainian Security Service] activities. In the article which we are talking about, an error has been permitted with regard to the SBU in the view of O. Bodruk and E. Lisitsyn: the authors, while involved with theoretical analysis of the national security problem, unsuccessfully attempted to assess the work of the Ukrainian Security Service on the whole (although they themselves were not involved with the service's problems). Understanding that the SBU represents specific collectives and specific people, O. Bodruk and E. Lisitsyn offer an apology to SBU and first of all to the military counterintelligence service for the unsuccessful submission of material.

The third author, A. Goncharenko, has a separate opinion on this issue. Here it is.

Criticism of the government, creation of shadow cabinets and demands for the retirements of leaders of ministries and departments—are a normal phenomenon for any civilized democracy.

The comments with regard to SBU activities that were expressed in the article were based on analysis of the conformity of this organization's proclaimed goals and tasks (Law on the Ukrainian Security Service, Article 2: defense of state sovereignty, the constitutional order, territorial integrity, etc.), specific results of its activities (an uncontrolled rampage, including inspired from without, separatist forces in the Crimea, Donbass, Kherson Oblast, The Transcarpathia and the organization of armed formations, including of foreign citizens), the systematic beating of people's deputies, and the humiliation of the State Flag of Ukraine; unpunished illegal activities and anti-Ukrainian propaganda of the representatives of foreign states on the territory of Ukraine, and existing cases of permanent financing of the activities of the RDK [Republic Movement of Crimea] not only from organizations and intelligence services of foreign states but also from the Ukrainian National Bank and others.

We also recall that a number of people's deputies (including in the form of deputies' inquiries), representatives of social movements and the press, and the Ukrainian Procuracy have pointed to the SBU's incompetence, inactivity and sluggishness.

Finally, I want to note that it is customary in democratic countries to prove the professional soundness of ministries and departments through deeds and not through complaints to the press or a total nonacceptance of criticism not only of the authors of analytical reviews but also of parliamentarians who represent the Ukrainian people. The criticism that has been expressed and the lack of convergence of positions does not in any way affect the authors' respectful attitude toward each other and also toward the third party—the Ukrainian Security Service.

1. Goals of Ukraine's Military Policy

Let's name the three primary goals of Ukrainian military policy.

First, the primary goal—in accordance with Ukraine's basic vitally important interests—is the creation of military-political conditions of a strategic balance with the states whose interests intersect with Ukraine's corresponding interests and which, as a result of that are potentially "charged" for a military confrontation with our state. Minimizing the possibility of armed aggression against Ukraine will be the consequence of that balance that is structured on the principles of defensive sufficiency.

The second goal of Ukraine's military policy is the creation of regional and global collective security systems and military-political cooperation in these directions and trends of development of the states of Europe and the

world which work to the advantage of conflict-free, stable development and social progress.

The third goal of Ukraine's military policy is the establishment of good-neighbor relations, cooperation and trust with our neighbors (in military-political aspects) as the most reliable and long-term factor of peaceful development.

2. States and Relations

Today we can talk about Ukraine's primarily regional interests. That is a question of the European Region. That signifies that our state's vitally important interests are primarily determined by the situation within the European Region. Thus, Ukraine's national security depends primarily on relations with those states that noticeably affect the situation in Europe.

We will analyze Ukraine's military-political relations with the countries of Europe. We can single out three groups of countries: the CIS states, the states of Eastern Europe that are not part of the CIS, and the states of Western Europe and the United States. In this article, we are not examining Ukraine's relations with the countries of the Near and Middle East, specifically with Turkey, Iran and Iraq which, however, we should in no way disparage. Ukraine's military-political relations with the CIS countries have ultimately focused on two main problems: the problem of strategic forces and the problem of the military legacy of the former USSR. The conservative and pro-imperial forces that are operating from the former center of the USSR have made quite a few attempts to use these problems as a hook through which they would be able to drag Ukraine to the bosom of the new empire.

To do that, the idea of unified non-nuclear forces (including unified non-nuclear general purpose forces) is being developed. However, it's obvious that the unified armed forces of several states is a unified military policy; a unified military policy is a unified policy; and, a unified policy is a unified economy. This chain of a gradual return to a centralized state within the borders of the former USSR is too transparent in goals and threatening in consequences for it to entice us. The disintegration of the USSR is irreversible in nature and, since it has begun, it is senseless and harmful to interfere with this process. The process must be completed and the formation of new independent states will inevitably be its result. Whether they will be united in the future or if they will exist outside of alliances, blocs, or coalitions, what the nature of their relations among themselves and with other states of the region and world will be—all of that will be brought to light only after the completion of the processes that are accompanying the disintegration of the Soviet Union.

Our state has totally defined its positions with regard to the strategic forces and the problems of the division of the military legacy of the former USSR. The strategic forces units and subunits that are deployed on the territory of Ukraine must be administratively subordinate to its Armed Forces command authorities and only

operational subordination must be preserved for the CIS Strategic Forces commander-in-chief. The Strategic Forces military formations in Ukraine will thereby not be "alien" troops and forces on the territory of a sovereign state. In the process, we will take into account that these troops and forces have strategic nuclear weapons and therefore can be a threat for any country of the world.

Full-fledged unified control of the nuclear forces with regard to our state will be achieved as soon as the technical issues with the "nuclear button" and with the information needed for the President of Ukraine to make decisions have been seen through to the end.

As for the division of the non-nuclear legacy of the former Union, the Black Sea Fleet has become the stumbling block in Ukraine's relations with Russia. While stating claims to the Black Sea Fleet (by the way, quite substantiated), Ukraine is requesting less than belongs to it in the Soviet Union's "naval legacy." Actually, based on expert assessments, Ukraine's contribution in all of the Soviet Union's naval programs totaled approximately 17 percent, and the value of the Black Sea Fleet does not exceed 10 percent of the total value of the "naval legacy." Just what is the matter here? Why is Russia so unyielding in the dispute on the Black Sea Fleet? The fact is that the Black Sea Fleet issue is tied to the problem of the Crimea and the problem of the Crimea is tied to the real possibilities of Russia's economic, political and any other possible presence in Southern Europe and the Mediterranean Sea.

So, in some sense, the individual issue on the Black Sea Fleet is an "indicator" of two major problems that have a greater political than military complexion. Hence, Russia's intractability with regard to the Black Sea Fleet. However no matter how difficult the task of dividing the Black Sea Fleet is, it must be resolved today because if the issue remains unresolved it will "impede" further development of Ukraine's military policy with regard to Russia and the other CIS member-states, and also impede Ukraine's acquisition of real independence and sovereignty. Delaying the resolution of the fate of the Black Sea Fleet is not in Ukraine's favor.

Ukraine's military-political relations with the countries of Eastern Europe that are not part of the CIS are developing within the framework of establishing a "multipolar balance of forces". It is a question of establishing Ukraine's multilateral military-political relations with neighboring countries. These relations of military-political cooperation which must lie at the foundation of good-neighbor relations, reliability and trust, relations devoid of prejudice. Today, agreements on cooperation have already been prepared between the Ukrainian Ministry of Defense and the ministries of defense of a number of Eastern European countries. These agreements have been coordinated with the member-states' ministers of defense. They can be signed soon. Work is

also being conducted for an exchange of military attaches between these countries. An agreement on cooperation has also been concluded between the Ukrainian and Hungarian Republic ministries of defense and a plan has been prepared for bilateral military-political cooperation between the Ukraine and the ChSFR [Czech and Slovak Federal Republic].

Ukraine's military-political relations with the states of Western Europe will become the key to the democratization of Eastern Europe. The fact is that after the disintegration of the USSR, Russia remains a major world power that has the second nuclear potential in the world after the United States. As a result, the United States "will remain" in the new Europe. This circumstance will cause the preservation of the North Atlantic Alliance as a strategic counterweight to Russia in Europe. New security relations in Europe will receive development with the participation of the European Community and the West European Alliance. The process that has been set in motion by the Conference on Security and Cooperation in Europe [CSCE] will become stronger. In the process, NATO—the oldest and most reliable system of European security, under the aegis of CSCE, will manifest itself as the stabilizing factor in the process of forming new security relations.

We need to react with caution to predictions with regard to the expansion of the EC and NATO due to the involvement in these organizations of the Eastern European countries that have obtained their independence after the disintegration of the Warsaw Treaty and the USSR.

Two reasons are impeding that. First of all, the enormous difference between the levels of development of the countries of Western and Eastern Europe which can in no way be disregarded. Second, obviously a limit to the scale of integration of democratic structures exists. The fact is that integration assumes the creation of "central" organs of rule which are inherently bureaucratic. Large scale integration leads to the creation of a more powerful central bureaucratic apparatus. The growth of that apparatus (structurally) and its reinforcement (functionally) will certainly promote the limitation of the democratic foundation of the integrated structure. Thus, a limit to the growth of the scale of integration of democratic structures exists: when that limit is exceeded, the destructive impact of the bureaucratic center is substantially increased, which can result in the structure's loss of its democratic essence.

Furthermore, we must take into account that at the present time it is premature to assert that all the new countries of Eastern Europe are unambiguously prepared to progress along the democratic path of development. The possibility of a neo-Communist coup in one or several of those countries is quite real.

Despite the fact that the EC and NATO will obviously not markedly expand, the growth of the influence of these organizations on the countries of post-Communist

Eastern Europe will be noticeable. The goal of that influence for the Eastern side will be its "approach" in development to the highly developed (not only in the economic, but also, for example, in the social and democratic contexts) countries of the West.

For the Western side, that influence is tied to possession of the capability to "nudge" the post-Communist states onto that path of development that will favor the increase of security and stability on the whole in Europe (this is not a question of interference in the internal affairs of sovereign states). Russia's role as a subject of that influence is hard to overestimate: its "orientation" will ultimately determine the stability and security of the new Europe.

We can assert that among all the countries of Eastern Europe, it is Ukraine that has the unique combination of qualities that permit it to be the conductor of the West's influence on Russia. Ukraine's geopolitical position and its powerful economic, scientific-technical and intellectual potential are the cause of that. These circumstances, just like Ukraine's potentially significant role in the future Europe, were noted for the first time by the authors of this article and today they are absolutely stressed in the majority of the works of Western analytical centers, specifically in a series of reports prepared in recent months by the Pentagon.

In the future, our country will inevitably occupy one of the leading places in Europe and, furthermore, Ukraine, while actively conducting a policy of disarmament (including nuclear), is not a potential enemy either for NATO or Russia. Ukraine is more stabilized than any of the new states, it has powerful ancient roots of ties (economic, demographic, and others) with Russia, and today these ties have not been disrupted and will not be disrupted in the future, they will only receive new content: two major states with an extended common border in principle cannot exist while isolated from each other.

While having an effective influence on Russia through Ukraine, Western Europe will seek not only the preservation but also the development of Russia's "European essence", while opposing the increase of its "Asian coloration". Therefore, Western Europe needs Ukraine more than the other states of Eastern Europe, this determines the need for integrated Europe's priority contacts precisely with Ukraine. Thus, the interests of the new Europe determine a special role and a special place for Ukraine in it. This "unfolding" of the political circumstances will obviously cause a close rapprochement, right up to Ukraine's unification with a united Europe.

The processes described will bring Ukraine to the need in the future to reject political neutrality; Ukraine's military-political relations with NATO will find their place in these processes.

3. On the Probable Enemy

The probable enemy is a military-political concept. They introduce this concept for review when a sufficiently

high possibility exists that a war will be unleashed (that is, when the state of the strategic balance is adequately unstable and relations among countries are confrontational in nature), and in the process the probable enemy, if he is correctly selected, is transformed into a real enemy with the initiation of combat operations. Knowledge of the probable enemy is needed for the formation of the structural development concept of our own armed forces: it is as if their operational and combat capabilities and combat missions are "being fitted" on the probable enemy.

If the probable enemy is defined, that is done within the framework of formulating the political aspect of the state's military doctrine. The task is resolved consecutively by steps:

the first step: a list of states is compiled, whose interests intersect with the state's interests and for which the probable enemy "is brought to light";

the second step: the states included on the list are verified for membership in the systems of collective security (military-political or military blocs, alliances, coalitions). If such states are found, the appropriate blocs, alliances, and coalitions are entered on the list in place of the states;

the third step: the states, blocs, alliances, and coalitions that have been entered on the list are compared among themselves according to potential military capabilities. As a result, the state, bloc, alliance, or coalition that has (have) the greatest capabilities is selected.

(To be continued)

Relatives of Ukrainians Serving Abroad Demand Their Return

92UM1414B Moscow NEZAVISIMAYA GAZETA
in Russian 20 Aug 92 p 3

[NEGA report under the rubric "Ukraine": "NEGA Reports"]

[Text] Committees of relatives of servicemen serving in other regions of the CIS are being formed in many oblasts of Ukraine. The purpose of the committees is to apply pressure upon the president and the government to return the Ukrainian officers and warrant officers to the homeland as soon as possible.

A constituent conference of the Lvov Kray Committee was held in Lvov on 18 August. According to one of the participants in the meeting, the committee's efforts will focus on conducting an event in Kiev on 21 September, at which the Ukrainian oath will be taken by servicemen serving in other CIS republics. The purpose of the event is to present the president with a fait accompli and force him to take more decisive action.

Russia-Kazakhstan Discuss Fate of Retiring Officers

92UM1423A Moscow NEZAVISIMAYA GAZETA
in Russian 21 Aug 92 p 2

[NEGA report: "Belarus"]

[Text] The latest round of Russo-Kazakh talks being conducted within the framework of the treaty on friendship between the two countries is devoted to military problems.

Among other things, agreement was recently reached on the status of Russian military personnel in Kazakhstan. The republic Ministry of Defense assured the Russian side that Kazakhstan would give special attention to protecting the rights of officers, who will be given a choice of remaining in Kazakhstan (and these will be granted all of the previously established benefits) or returning to Russia upon completing their military service.

"We would like for every officer to serve at least 10 years here," Bulat Dzhanasayev, chairman of the parliament's Committee for Defense and National Security, announced at the talks. "None of the regular military personnel will go without work."

14th Army Assesses Damage in Wake of Dniester Fighting

92UM1414D Moscow KRASNAYA ZVEZDA
in Russian 26 Aug 92 p 2

[Report: "The 14th Army Has Suffered Great Material Loss"]

[Text] The loss suffered during the armed conflict in the Dniester region is estimated at 66 million rubles. This was reported by Lt Col Vladimir Matskul, an officer at army headquarters. Motor vehicles and engineer equipment worth 44 million rubles was put out of action or destroyed, dozens of buildings were destroyed or damaged, and a GSM [fuels and lubricants] dump was blown up.

UKRAINE

Ukrainian Troops Polled on National Relations

92UM1425A Kiev NEZAVISIMOST in Russian
15 Aug 92 p 3

[ANI report under the rubric "Topic of the Day: An Express Poll": "Sound off: One, Two!"]

[Text] Instructors in the School of Political Science and Sociology at the Donetsk VVU [Higher Military School] conducted a survey of personnel of the 21st military unit, which is deployed in five areas of Ukraine and the Crimea. Only servicemen who had taken the oath of loyalty to the people of Ukraine were polled.

More than 60% of the respondents had a positive attitude toward Ukraine's establishment of its own armed forces, around 13% were negative, 15% were indifferent and 10% had difficulty answering the question. The largest percentage of respondents giving a negative answer was among young officers (around 25%). The largest percentage of respondents (46%) giving a negative response were among the first-term servicemen. Furthermore, every third first-term serviceman stated that it made no difference to him in what army he served. Almost 70% of the senior officers polled gave a positive response, while around 12% of their responses were negative.

To the question "Is there animosity based on nationality among the personnel of your unit?" 18% of the respondents answered in the affirmative. Senior officers are most aware of this animosity, with every fifth one indicating that the problem exists.

To the question "How do you see the future of the armed forces of Ukraine?" more than 40% of those polled replied that they saw them as part of an alliance with Russia and other republics of the former Union. The figure was almost twice as high among the officer corps as among first-term servicemen. More than 17% of those polled see Ukraine as part of NATO, and there were almost three times as many proponents of this among the rank and file as among the senior officers. Twenty-nine percent of those polled do not want Ukraine to belong to any of the existing military alliances.

Every fifth respondent indicated problems between unit servicemen and the local population. But while 83% gave a positive evaluation of relations in western Ukraine, fewer than half did so in the south. Almost 40% of the servicemen participating in the poll are dissatisfied with the moral climate in their subunit and the quality of the food in the unit. More than half of those surveyed feel that the army does not have good morale, and almost 70% believe that the armed forces do not enjoy prestige in the society.

Officer's Union Refutes Criticism of Morozov

92UM1414A Kiev *NARODNAYA ARMIYA* in Russian
19 Aug 92 p 2

[Report by Lt Col Valeriy Fedotov, senior officer at the Odessa Military District Press Center: "A Rebuff to the Slanderer"]

[Text] An "Open Letter to Col Gen K.P. Morozov, Minister of Defense of Ukraine," was published in an issue of SAMOSTIYNA UKRAYINA (organ of the URP [Directorate for the Dissemination of Printed Material]). The author of the letter, a reserve lieutenant colonel who introduced himself as a member of the Odessa Oblast Organization of the SOU [Ukrainian Officer's Union], cited a number of alleged negative facts pertaining to the activities of Lt Gen V. Radetskiy, commander of the Odessa Military District. The executive committee of the

Odessa Oblast Organization of the Ukrainian Officer's Union has issued the following statement in response:

The author of this article, Lt Col Ivan Mikhaylenko, does not reside in the city or the oblast and is not listed on the roster of the Ukrainian Officer's Union, a fact confirmed by statements received by the Union and by the registry of members of the SOU.

The executive committee of the SOU's Odessa Oblast Organization issues a firm protest against the slanderous article about the commander of the OdVO [Odessa Military District] and believes that the editors of the newspaper SAMOSTIYNA UKRAYINA grossly violated the Law on the Press and journalistic ethical standards in the preparation of this article.

BELARUS

Belarus Names Tank Army Commander

92UM1423E Moscow *NEZAVISIMAYA GAZETA*
in Russian 21 Aug 92 p 2

[NEGA report: "Belarus"]

[Text] Major-General Vladimir Uskhopchik has been appointed Commander of the 5th Tank Army, which is stationed in Mogilev Oblast and is subordinate to the Ministry of Defense of Belarus. In January 1991 he was Commander of the Vilnius Garrison and was directly involved in the attempted coup in Lithuania.

Over 1300 Belarusian Border Troops to Return Home

92UM1414E Moscow *KRASNAYA ZVEZDA*
in Russian 26 Aug 92 p 2

[Article by Valeriy Kovalev and Pavel Chernenko: "1,304 Belarusian Border Troops Serve in the Central Asian Border District. They Will All Return Home."]

[Text] A total of 1,304 first-term enlisted men drafted from Belarus will soon come home, to the jurisdiction of the Main Border Troop Directorate of the republic's Council of Ministers.

This decision, Maj Gen Yevgeniy Bocharov, commander of the republic's Border Troops, stressed, was made at the request of the Belarusian government. The transfer of soldiers from the Central Asian Border District has already begun. Incidentally, more than 600 border soldiers have already returned home from other regions. By decision of the Belarusian government Border Troops drafted in the fall of 1990 will be released into the reserve ahead of schedule. The rest will continue their service in the Belarusian Border Troops.

Belarus Prosecutes Corrupt Officers

92UM1439A Moscow KRASNAYA ZVEZDA in Russian
3 Sep 92 p 2

[Article by KRASNAYA ZVEZDA correspondents Valeriy Kovalev and Pavel Chernenko: "The Belarusian Ministry of Defense Has Declared War on Bribery and Corruption"]

[Text] Those who like to profit at state expense were to be found in the army even in the past. People usually preferred to keep silent about this, however. Our officers, the reasoning went, could not abuse their service position, swindle and steal. Harsh action was taken against those who were caught, to be sure: discharge from the military, legal action.... This has recently become more difficult, however. With the collapse of the Union and the disintegration of the Soviet Army, many commanders and chiefs whose service position requires that they see to the safekeeping of military property and set a personal example in this matter were drawn into various kinds of machinations. The uncontrolled and illegal private activities of certain individuals in charge apparently peaked during precisely this period.

To a certain degree this also reflected the social protection provided the servicemen, who were brought to the brink of poverty in many republics of the former Union. We were informed at the Belarusian Prosecutor's Office that the number of legal infractions increased 2.6-fold during the first seven months of this year, while those committed by individuals in charge (exceeding their authority and abusing their service position) grew 6-fold.

Naturally, the growth of criminal activities among the officers could not fail to trouble the republic's Ministry of Defense. The prosecutor's officer conducted thorough investigations in many units and subunits. The findings were reviewed by the Collegium of the Ministry of Defense, which has dealt the first perceptible blow against corruption in the armed forces. Eleven generals and other senior officers have been relieved of their positions and are to be discharged from the military. The props have been knocked out from under several dozen other military officials of various ranks, criminal charges have been brought for abuses, and the so-called commercial activities of a number of commanders and chiefs are under investigation.

These are drastic measures, but we feel that they are perfectly justified. Some units and formations have literally been swept by a wave of avarice. The administration of the 5th Guards Tank Army was affected particularly greatly by this infectious disease. Nor did it skip Lt Gen S. Rumyantsev, formation commander. Upon arriving in the BVO [Belarusian Military District] from the Western Group of Forces last year, he decided to set himself up in a grand manner at his new station. The foundation of a dacha, a luxurious two-story private residence, was soon laid not far from Bobruysk. There is nothing criminal in this, of course. A person can build himself a palace if he can afford it. The problem lay in

how the construction was performed. It involved extensive use of the free labor of soldiers and of military equipment.

Other army staff officers were emboldened by the commander's example. Military vehicles hauling construction materials and workers in uniform moved in a continuous stream to "Rumyantsevka," as it was christened by local residents. Construction proceeded at a pace of which an ordinary builder of a dacha could not even dream. The luxurious villas grew not by the day but by the hour.

But how were the funds and materials acquired to build them? Military equipment, property, and GSM [fuels and lubricants] were sold off right and left, scarce goods were stolen from army depots, groups of soldiers were sent to work at civilian enterprises.... The scope of the corruption which struck the army administration is indicated by the fact that, according to Col Gen P. Chaus, deputy defense minister of Belarus, when the staff of a mechanized corps begins to be formed out of it, none of the present high-ranking personnel can be appointed to positions in the corps.

The military prosecutor's office exposed similar cases in the 7th Army. Col V. Ivanitskiy, deputy commander for rear services, particularly distinguished himself in the field of dacha construction. Criminal charges have been brought against him. He used personnel and equipment at the construction site continuously from April 1991 to July 1992. Jr Sgt V. Rudenkov spent almost a year there, for example. A group of five servicemen worked more than a month on the construction of the country residence. Some days six to eight units of equipment were employed in the construction at the same time. Observing their commander, Lt Col S. Arkhipov and Maj A. Gudoshnikov also operated without inhibition. Their dachas were also built by enlisted men using army equipment.

The military prosecutor's offices acquainted us with many other cases of abuse, theft and swindling uncovered by the legal experts in the units and formations. Not just people wearing the shoulder boards of generals and colonels were involved in these illegal actions, but mid-level and junior command personnel as well. And how could it have been otherwise? The common people rightly say that a fish rots from the head down. How could commanders and chiefs, themselves drawn into the quagmire of bribery, corruption and greed, erect even a slightly reliable barrier against the theft of the people's goods?

The climate of impunity and anything-goes which reigned in the former BVO also contributed to the crescendoing growth of greedy violations of the law. A sort of organizational and legal vacuum formed following the collapse of the Union and the subsequent

disintegration of the armed forces. "Commercial activities," monitored and regulated by no one, began in the forces and rapidly turned into the base hawking of military goods at all levels.

Due credit should be given to workers with the Belarusian Prosecutor's Office. Back in March of last year Maj Gen Justice A. Glyukov, military prosecutor of the Belarusian Military District, sent a report on cases of abuse of service position for personal gain, theft and swindling uncovered in the units and formations to the commander of the BVO. There was essentially no response to the notice, however. Most of the culprits got off with a slight scare, so to speak, and were given purely token punishment.

Reports from the military legal experts were finally heeded and the ice began to budge, so to speak, only after the republic's Ministry of Defense was established. In addition to the steps already mentioned, the republic's Ministry of Defense approved a decision to certify all individuals responsible for materiel by 15 September and to ban the involvement of military personnel in commercial activities in order to restore a healthy climate in the military collectives. A universal check-and-audit inspection will be conducted in the forces during the period August-October, with finance and law-enforcement agencies taking part.

One should not think that these ugly developments are typical of Belarus alone, however. The legal ambiguity—which regrettably still exists today—and ill-conceived attempts to legalize commercial activities in the military structures are the causes of the abrupt flare-up of crimes of greed in the military environment. In view of this, broad public support should be given to steps being taken by the military departments not just of Belarus to root out commercial, greedy inclinations among military personnel

BALTIC STATES

Latvian Defense Minister on Priorities, Budget Allocations

92UN1912A Riga TEVIJAS SARGS No 1 in Latvian, Jun 92 pp 2, 7

[Interview of Defense Minister Talavs Jundzis by Edmunds Zabis; time and place not given: "Horizons are Indeed Expanding"]

[Text] Talavs Jundzis. Republic of Latvia Minister of Defense, born 1951 in Gulbene. Lawyer. Has a daughter.

[Correspondent] What do you view as the priority for strengthening the capacity of defense?

[Jundzis] My conception is that our first priority now must be development of a communications system. The second would be transportation vehicles and weapons. And, of course, the next would be constructing buildings, furnishing them, renovating, and creating an infrastructure.

In the area of communications we have a serious program, but it also requires serious resources. We have already begun to realize this program. We have already purchased a large number of portable radios; now our border guards are able to communicate, at least within several kilometers of one another. We have purchased a considerable number of fax machines. They are also business instruments, but we need them so that operatives can communicate with our battalions and civilian administrators. We have already begun installing them here and there. We have begun to purchase some computers and in the second half of the year we will purchase more, so that all battalions and civilian administrators have computers. In the second half of the year, utilizing the former KGB communications system, we want to connect with the center. If, by year's end, we have not implemented this system competely, we will be close to it. Then we will be able to connect up to the Ludza battalion, for example, from this office and determine by computer how many combatant officers and soldiers have reported today, what kind of disciplinary offenses have occurred, and how many supplies have been received.

[Correspondent] What can you tell us about financing the defense forces?

[Jundzis] In the draft budget for the second half of the year 3.4 percent of the total budget is allocated for the defense forces. Included in this figure are also resources for the national defense academy, which is beginning to function in earnest. In the first six months of the year this percentage was 3.7 and bear in mind that that was really very little. We truly hope that the parliament comes forward to meet us in the second half of the year. Parliament will be given these figures, they were submitted by the government. The draft budget has this 3.4 percent, so it is less than in the first half-year. The home guard, interior ministry and security service also have smaller budgets. That is simply based on our extraordinarily difficult economic situation, that we need to eat, to drink, that we still need culture and protection of health. That is all, of course, quite correct. It is not said outright, but apparently it is believed that no one will attack us. But perhaps the most powerful factor that bothers the parliament would be more fundamental, that the defense system must decide such an important question!

[Correspondent] How does it appear to you... Are horizons expanding or shrinking? On the one hand the Baltic states defense ministers' meeting in Pernava, on the other, the sharpening relations with the Russian army.

[Jundzis] No, it is indisputable that horizons are expanding, for our horizons still lie not only to the East. The meeting of the defense ministers of the Baltic states in Pernava only expressed its satisfaction and even

enthusiasm for the potential of mutually resolving our important problems. For a long time we were tormented by those same air defense forces questions: how to be, what to do; we travelled to foreign countries, met with experts. It turns out that the Estonians were doing the same thing, the Lithuanians, too. Why didn't we put our heads together? Today we were in the Lilaste and Adazi ordnance yard. Why can't we use this ordnance yard for training with Lithuania and Estonia? I hope that it is transferred to the defense forces. Why shouldn't we develop an anti-aircraft defense system with these countries? But in the West our chances are completely inexhaustible. As for relations with Russia—we cannot count on world public opinion. This thought, of course, we must develop, objectively explaining the situation. In our last session with Russia at the negotiating table it went very gravely and there was a point when we all wanted to get up and leave the negotiating table. But no matter how difficult it was we kept on talking; we will continue to talk and we will achieve something. Speaking with [Russian army] commanders here, in Latvia, often it is much easier to make contacts and achieve insights. For example, we were at a military site and the commander said: 'Please, come inside. If only Moscow would permit you to take custody of the site, we will give you the quarters in ideal order.' So, relations are varied. That is why we must speak with people and clarify. And that includes those in Moscow.

[Correspondent] Putting out a newspaper is your idea. In this regard it would be interesting to know your thoughts. What, in your opinion, would education and culture give to strengthening defense capacity?

[Jundzis] Perhaps in the United States army they themselves now say that they fight, in fact, with technology and electronics, and that the human is somewhere on the second level, and all their concepts are based on that. For us the main thing will be the person, and technology will be his helper. If there is no education, culture and spirituality, we will not get far. To achieve it, deepening and nurturing the person, that, to my mind, is this new newspaper's chief assignment. The newspaper is something to unify us. We are missing this unity in the defense forces, that is, in the force structures subordinated to the defense ministry. These great unifying reserves relate directly to our mutual cooperation with the home guard, the police and the security service. And I think that this is a wonderful opportunity. Look, we have one platform from which we can together express our views. And let's remember Oskars Kalpaks day, when we, all the representatives of these forces, stood at the Freedom Monument—that was uniquely unifying. I think that the newspaper will be what unites these forces. But we should not underestimate the newspaper's extraordinarily important assignment of informing our society, which may not be directly connected with military structures, but which nevertheless pays taxes to support the national defense forces.

You will be able to read about the thoughts of minister Talavs Jundzis on international aspects of Latvia's

defense and on the state's concept of defense in this conversation's continuation, which we will publish in the next issue, forthcoming in July.

Latvian Deputy Defense Minister Interviewed on Background, Views

92UN1825A Riga LAUKU AVIZE in Latvian
10 Jul 92 p 10

[Interview of Deputy Defense Minister Valdis Pavlovskis by D. Lemesonoks: "Semper Fidelis (Latin for 'Always Faithful,' the motto of the US Marine Corps)"]

[Text]

He hoped to participate in a war against the Soviet Union.

This man's name is VALDIS PAVLOVSKIS. He is the RL [Republic of Latvia] deputy defense minister, responsible for troop training, external relations and state strategic planning. This US citizen was offered the position because of his active work in Latvian emigre organizations (American Latvian Association worker, later its chairman; World Federation of Free Latvians board member, later its chairman; American Baltic Freedom Fighters League founder and leader), and his escorting of our statesmen through Washington's "halls of power". His military career in the US armed forces (1958-1968), culminated in the rank of Captain. After that he was an urban planner and planning manager in city administration sections, which was a necessary civilian experience that helped the former US Marine commander become a military official in another country without a problem. The Pentagon could make serious trouble for a Latvian-American officer with high rank for such a thing.

[Lemesonoks] The US Marine Corps is a unique military unit subordinated to the President. He can in the event of an emergency quickly order them to any "hot point," without even requesting approval from the Congress. Marines are the honor guard at the White House, guard US embassies around the world, and brought "order" to the island of Grenada when Cuban "builders" began to busy themselves there. They tried to do the same in Lebanon, but with less success.

A Latvian lad's journey to the Corps was long and blown about by the winds of World War II. Twin brothers Valdis and Olgers were born in Riga on April 19, 1934 to a worker and housewife family. At the age of ten they left the city of their birth on one of the last German boats, forever retaining the memory of its bombardment (October 10, 1944). After that they were in the Eslingen refugee camp, where the youngest brother, Agris Uldis was born. He is an economist and political scientist, but Olgers is a microbiologist. All three are popular emigre activists. In 1949 the family arrived in the US. The father worked in a factory, the mother as a maid for an American family. Valdis worked cleaning stores and restaurants in the evenings, studied social science at the University of Portland (in Oregon, on the Pacific

Ocean). Then he enrolled in Officer Candidate School, becoming a second lieutenant in three months and a Marine officer in nine months. He served one and one-half years in the Far East, chiefly at the US base in Okinawa, Japan.

[Pavlovskis] Back then we Latvian lads joined the US armed forces primarily because there was always the possibility of war with the USSR. We hoped to participate in it and thus fight for Latvia's freedom. Other Latvians found themselves in the army, the Green Berets, and other specialized units which were very oriented toward battle and, in the event of war ready to fight in the front lines. That's how it was. Why Latvian lads join the American army today I do not know. Apparently it is the same as in my day, because even then the thing was not on a massive scale. I know that in "Desert Storm," when Kuwait was liberated, at least five Latvian soldiers participated.

Secondly, in my view, the opportunity to command others was a necessary part of my professional soldiering experience.

Thirdly, if I planned a political career in America (He was chairman of the Oregon Young Republicans College League in 1954-56;—D.L.), army service would benefit my biography. Initially my contract was only for four years, but I liked it....

When I returned from service Latvians had become prosperous and were building meeting halls. I had lost the opportunity to participate in the development of American-Latvian society. In those ten years my Latvian-ness still suffered; I began to forget the language. When I was in college we Latvians were still poor. Our main preoccupation was survival and securing our lives.

[Lemesonoks] Seeing the Vietnam War, Valdis Pavlovskis, like other Corps officers, volunteered to fight. First he had to serve the required three years in officers' school as a tactics instructor. That is why he arrived in Vietnam only a year after the first Marine units. The war had not yet built up steam. In the beginning he was a company commander; later a staff officer.

[Pavlovskis] I am often asked about war and battle experiences and then I must admit that I have none. Our company was stationed at a base which controlled a defined territory. From this base patrols set out to survey the area, one of the units (in a US company there are three regular units, one machine gun unit and one anti-tank unit.—D.L.), and I sometimes accompanied them in the district. Occasionally the partisans had a desire to shoot a bit. That's all. No battles. Everything was very peaceful. When I returned home the war began to grow in size. Many Latvian lads died in Vietnam.

[Lemesonoks] European society denounced this war, accusing the US army of brutality and imperialism.

Many opposed the war in America itself. Valdis Pavlovskis is completely convinced that neither he nor any of his colleagues in Vietnam committed any crimes or shameful acts.

[Pavlovskis] We fought for democracy, against Communist imperialism. If South Vietnam had come into Soviet hands, Thailand and other Southeast Asian countries would have been threatened. Yes, the Communists invaded South Vietnam, although the USSR was tired and did not wish to continue. The American forces beat them badly. We lost a few battles, until in the end the North Vietnamese threw their last reserves, like Hitler in battles in Ardenne. The US lost the war on the field of politics. The Americans had a great shock, they said, "Let's end it!". That did not happen in one day; anti-war sentiment grew in power over a long time. You see, Americans want to resolve problems quickly. The World War lasted only four years for America, the Korean War was short, and very short in Kuwait. A major role was played by television. It showed war not in the abstract, as in newspaper articles, but visually, how injured people suffer, how they die, how bloody and brutal war is. That helped to make the war unpopular. In Europe the North Vietnamese and the partisans were very famous, even though at least 90 percent of them were pressed into fighting against the Saigon army and US soldiers. Communist informers turned in anyone brave enough to support the government or the Americans. These people were tortured and murdered. I often saw that myself. A twelve year old Vietnamese boy would visit our company until one day he disappeared.

[Lemesonoks] Pavlovskis cannot understand how the Vietnam War can be compared to the Afghanistan War. The Marines, just like the Mujahadeen fought against Communism! I remember the famous American film director Coppola's anti-war film, "Apocalypse Now." Although the American soldiers were severely criticized in it, still there was a point in it where in one officer remembers vaccinating children against smallpox in some village. Afterwards the Americans discovered a pile of chopped-off hands.... Imperialist propaganda? But right next door, in Cambodia, Maoists murdered millions of their countrymen.

[Pavlovskis] Chemical weapons against civilians? Agent Orange is not dangerous to people; it has been studied for years in experiments. In California it is used to eradicate weeds.

[Lemesonoks] My conversation partner is an anti-communist in principle. That is why it was interesting to ask the deputy minister about his relations with his colleagues, for a large number of them are former Soviet army officers and thus one-time CPSU members.

[Pavlovskis] Our relations are good. They are solid people, patriots. It is easy and pleasant to work with them—quite like with American officers. Their past does not worry me.

[Lemesonoks] The defense ministry inherited its building from the Soviet Latvian military registration and enlistment office. The scent of foot-wraps and boots seems ineradicable. In an office where the walls are trimmed with dark plywood suitable to the tastes of the Soviet nomenklatura (not one section or cupboard has been squandered), sits a man from California, a one-time member of the Los Angeles Latvian theater troop. On the wall are framed photographs in which he is seen together with Reagan and Bush, at the bottom of each are hand-written greetings from both presidents. A small Latvian flag stands crossed with the Marine Corps standard.

How does Mr. Pavlovskis feel about being a Soviet bureaucrat? Because, after all, we still have both a Supreme Council and a Council of Ministers; by the criteria of the Latvia Committee he is a servant of the occupiers. Mr. Pavlovskis, characteristically American, straight-forward and candid, does not hide a smile.

[Pavlovskis] It's nothing new. I have worked in American city offices. There is bureaucracy in the US, too, similar to that of the army. Private business can seek suitable employees and fire the useless ones, but in a bureaucracy one must work with those people given by the state (the same as in the army). They must be persuaded that the job is important and must be performed well. And only at the very end, when nothing else works, does punishment come. And bureaucracy in America is similarly slow, though of course here things are resolved so slowly that nothing can be done in two or three months time. You waste a lot of time and energy. Everything seems in order, but you have to start all over again. That is my biggest problem here.

It's too bad that people have grown accustomed to blaming everything on the Soviet system. In place of admitting their mistakes or inaction, they curse at the councils and feel satisfied. I cannot accept that. There is a Latvian system here now, where negligence has no place! When I attended Officer Candidate School I happened to mispronounce some word. Our square sergeant grabbed me and asked, "What are you, lad?" "A Latvian," I answered. "Oh, they are good soldiers," said this American sergeant not long after the Second World War. We must be convinced about ourselves, that we are able to defend our Homeland, to die for it. Unfortunately, Latvian youth still are not convinced, for they have a strong anti-army spirit left over from the Soviet era.

[Lemesonoks] Perhaps you could add something from your Marine Corps experience?

[Pavlovskis] The Marines have very strict discipline, although you might think, having seen Hollywood movies, that the American soldier is very loose. Short hair, neat attire. An officer must care for his charges and must be an example to them. A person must not only be taught to carry out an order, but also one must explain why he must do so. There are still some sacred concepts, such as "Spirit of the Corps," and, of course, "Semper

fidelis." Everyone sticks together, they are proud of that, that they are soldiers, faithful and patriotic, fighters. To strive to win, to be the best—that is also taught in the Latvian army. I do not know what kind of reputation Latvians had in the Soviet army, but in the West they did not die ashamed.

I say to my colleagues, getting carried away and saying it too often, that we do it thus in America, so that I can instruct them. Or better yet, to say: But we in Latvia do it thus. One should not think that everything American is 100 percent right, and that all things Soviet are wrong. It would truly be dumb if Latvia listened to emigres as bearers of holy scripture, for the wisdom of emigres is considerably exaggerated.

And I did not come to the ministry to move mountains, but to do many small things. I do not have ready answers, only thoughts and another, American, way to wrestle with these problems. So, we can compare and determine which resolution is better.

[Lemesonoks] Valdis Pavlovskis married lawyer Dace Bremere in 1986. She is a Small Business Administration advisor. Maintaining family contacts at this moment is helped by international long distance phone lines. While it is hard to be without a husband, she still let him go to Latvia. Conservative people did fear that the Communists would compromise Pavlovskis and make him a scapegoat. He would never accomplish anything, only ruining his career.

The deputy minister's salary was 4,000 rubles, and since June 8,000 rubles per month (with a coefficient of 8.7). In America he earned \$54,000 per year.

[Pavlovskis] Yes, to survive it is enough for me. Seriously. I did not come here to play the rich American gentleman. I have some perquisites: a car, so I do not have to crowd into a bus; a pleasant room in the Supreme Council hotel. I was offered an apartment in the government house on Lubana street, but I declined. (A wise choice. The Cepans family's ceiling flooded there, and a Greek, despite the armed guard and security system, was robbed there.—D.L.) I wash my own clothes and shop at the Matijas market on my free days. It is more expensive there, but the lines are not as long. I guess I'll never get used to them. Of course, I have my clothes and shoes from America. When I have to buy new ones or some piece of furniture, then it will be hard. I'll have to moonlight in another job at night.

It is really ridiculous when a secretary at a private firm, who speaks a little English, earns more than [president] Gorbunovs. A government can't survive like that and cannot attract good specialists and will not move forward.

I, like other salaried Latvian workers, get angry when I hear my American friends say, "Look, and for this I paid a mere 20 rubles!" To me they have a completely different value.

[Lemesonoks] Latvians from America think it terrible that in Riga they hear only the Russian language. They will not go to the Fatherland to speak in a foreign tongue. Does that cause you problems?

[Pavlovskis] That's just patter. On America's streets you hear Latvian, Chinese, Spanish. Every person has a right to speak in his mother tongue. I am more concerned by the carelessness and laziness in stores and cafes, and by people spitting on the street.

[Lemesonoks] Yes, of course, it is difficult to explain the necessity of an army in a country where buses do not run because of a shortage of gasoline and economy furnaces are being prepared for the winter. Still, 9,000 men are needed to defend the people from internal and external enemies, and a collective security system. Even Luxembourg has a thousand-man army and is a member of NATO. If Russia's army withdraws quickly and Latvia is ruled by political stability, after five or so years, Latvia may become a signer of the North Atlantic treaty.

Also other officers will arrive to train Latvian soldiers, each for at least two months. Otherwise they run in for a week, confuse everyone and leave!

[Pavlovskis] I have ended my career as a Marine captain. Here I am a civilian and I will stay that way. The army must be controlled by civilians. Leaving generals to their own devices is dangerous.

[Lemesonoks] Valdis Pavlovskis begins working at 7 a.m. Catching up to him was not easy. Until late in the evening he is in command and government meetings. Mr. Pavlovskis says, justifying himself, that there is nothing to do with his free time: Television is boring, the theatre season is over, and the movies do not "draw him in."

He hopes to work in the ministry for several more years and then he will start thinking about his pension.

Lithuanian Civil Defense Chief Views Service's Reorganization

*92UN2008A Vilnius EKHO LITVY in Russian
15 Aug 92 p 2*

[Interview with Sigitas Valaitis, chief of the civil security service for the city of Vilnius, by EKHO LITVY correspondent S. Sileikyte: "Civil Security: Problems and Prospects"]

[Text] The civil defense system, like all of Lithuania's other state and public structures, is undergoing fundamental changes. In other words, it is being reorganized. A civil security service has been set up under the Ministry of National Defense. What are its functions, its structure and missions? Sigitas Valaitis, chief of the civil security service for the city of Vilnius, talks with our correspondent about this today.

[Sileikyte] What are the basic differences between your current service and the former civil defense system?

[Valaitis] In the first place, we have set different missions for ourselves. That which was good for a militaristic, totalitarian state is not suitable for a democratic state. While the main purpose of civil defense was to ensure the smooth operation of enterprises and protect the population in wartime conditions, our priorities lie in battling the effects of all sorts of industrial accidents, natural and other disasters, and helping the population in emergencies. Our system is being reorganized in accordance with these missions.

[Sileikyte] What is the present stage of development of this reorganization process?

[Valaitis] We are at the very beginning of the path. In order to traverse it we need first of all the legal basis and a charter for our service. Incidentally, a decree passed by the Government of the Republic of Lithuania charged the Ministry of National Defense with working out the drafts of these documents and submitting them for consideration by 1992. Unfortunately, we still do not have them, and many issues of fundamental importance have simply been left hanging in the air. It is time to decide on our subordination, for example. Our service was set up under the Ministry of National Defense. We exist on funds from the local budget, however. I believe that if our missions are to be purely civilian (our service must function effectively also during a war, of course) and if we are financed by a local self-governing body, we should be subordinate to it.

Once again, we have structural subdivisions. It seems to me that we made a big mistake by tearing down the former system without creating something new to replace it. Vilnius was previously broken down into four districts, for example, in which 24 civil defense staff workers operated. They were simply discharged. And they could have been left in the seniunais. There are 20 seniunais in the city, and one civil defense staff worker could have been left in each of them. The service structure would thus have been preserved. Today all of our structures are manned by staff workers from the civil security service. Our work is not very effective. I repeat, however, we are in the organizational stage. We are waiting for our status to be defined and for a law and a charter to be passed.

[Sileikyte] But Lithuania's government established a number of civil security signals with Decree No. 7 of 30 July 1992. What could you say about that decree?

[Valaitis] One should not think that there is a serious danger to the population only during a war. There are 13 plants in Vilnius which use powerful toxic substances in their production processes, for example. These are meat and dairy combines, refrigeration and water-purification facilities and others. An accident at any one of them could have the most lamentable consequences for the entire city. And can you imagine what it would be like if, as an example—God forbid—the Kaunas dam were to break? The 12-meter wave would sweep away everything as far as Kurshskaya Spit! These signals were worked out

and approved precisely for warning the population of impending danger. Every country has them. There were five in the Soviet union. Our government has established eight. I shall use this situation to describe them briefly. The first is "Attention, All!" It is a warning signal issued by means of sirens and other signalling methods. Upon hearing it, residents are to turn on a radio, a television set or a loud speaker, over which either an emergency civil security signal or a report on the emergency situation will be broadcast immediately. "Radiation Warning" and "Chemical Warning" are signals warning of an immediate danger of radiation or chemical contamination. They are transmitted the same way as the first. "Catastrophic Flooding" is a signal warning of the danger of flooding from rivers overflowing their banks. "Hurricane Warning" warns of the danger of an extreme hydrometeorological development, while "Air Alert" warns the entire population of the danger of an enemy air attack. And the last signal, "All Clear," is also for all residents, informing them that the danger of an enemy attack has passed. The signals are transmitted through communication lines, through an automated warning system and by radio and television. Our service ensures that these signals are transmitted.

[Sileikyte] In some cases, though—at the "Chemical Warning" signal, for example—rank-and-file people simply do not know what to do, what steps to take to protect themselves against the impending danger.

[Valaitis] You are right. This is our main problem. The job is one of making every person aware of what action he should take in this or that extreme situation. This is essentially the reason for our service's existence. Foreign countries have special civil defense centers, rescue teams and special groups, and a well-planned communication system. They conduct courses for the population and have a great deal of special literature. It goes without saying that a lot of money is allocated out of the state budget for these purposes.

In the future we also plan to set up a special group of rescuers and arrange our operations in accordance with the model of the Western civil defense services. But that is for the future. Right now we would be happy merely to come up with a booklet to inform the population of what they should do in this or that extreme situation. You know how strapped the self-governing bodies are for funds, though.

[Sileikyte] It would seem that is up to drowning people to rescue themselves.

[Valaitis] It seems that way for now. I have no doubts, however, that when we grow somewhat stronger, the state will turn its attention to this truly important aspect of life, civil security.

Lithuanian Deputy Defense Minister Dismissed

92UN1972C Vilnius LETUVOS RITAS in Russian
14-21 Aug 92 p 2

[Unattributed article: "A Surprise Awaits the Colonel"]

[Text] LETUVOS RITAS has learned of orders from the Prime Minister A. Abisala according to which Norbertas Vidrinskas is to be released from his duties as the deputy minister for protecting the territory of the Lithuanian Republic for major infractions in performing official duties.

"For what infractions was the deputy of A. Butkevicius dismissed?" we asked the officials from the ministry. P. Mastavicius, the acting chief of the Personnel Department, having heard this, was surprised as Col N. Vidrinskas who had to protect the territory in a difficult time is known at the ministry as an "authoritative person." P. Mastavicius had the best impression of this man.

"I was not informed on the case of N. Vidrinskas and I did not even know that the deputy minister was undergoing checks," the Chief of the Department for Ties With the Public, A. Meskauskas, told LETUVOS RITAS.

Officials from the ministry have reported that N. Vidrinskas is on leave, although according to the statement he was appointed only on 13 August.

CENTRAL ASIAN STATES

Kazakhstan Issues Text of Military Oath

92UM1428C Moscow KRASNAYA ZVEZDA
in Russian 28 Aug 92 p 2

[Kazakhstan Presidential Decree: "Kazakhstan Presidential Decree on the Military Oath"]

[Text] As a result of the formation of its own armed forces in the republic and the need to have servicemen take the oath, the President of Kazakhstan has issued a decree containing the full text of the oath. Servicemen who are performing military service in the Strategic Forces and citizens of other states who have entered republic military educational institutions take the military oath for Strategic Forces servicemen which was approved by the CIS heads of states on 16 January 1992.

MOLDOVA

Moldovan Authorities Round up Weapons

92UM1414C Moscow NEZAVISIMAYA GAZETA
in Russian 20 Aug 92 p 3

[NEGA report under the rubric "Moldova"]

[Text] According to Nicolae Obreze, chief of criminal investigation for Moldova's MVD [Ministry of Internal Affairs], the existence of captured weapons among the population is making it difficult to confiscate them.

In an interview conducted by the newspaper MOLODEZH MOLDOVY, he reported that the population had voluntarily turned in more than 500 assault rifles, four machine guns, eight sniper rifles, seven grenade

launchers, 121 antitank grenades, more than 48,000 bullets, one Alazan missile and 14 antitank mines during the first 10 days of August. Nicolae Obreze said that weapons stolen from military units, sold from military depots or found at sites of combat operations constitute the main difficulty. No one knows how many weapons the population has. They circulate freely around the republic and are frequently taken out of it.

OTHER STATES, REPUBLICS

Dniester Republic Takes Inventory of Military Aircraft

92UM1423D Moscow NEZAVISIMAYA GAZETA
in Russian 19 Aug 92 p 1

[NEGA report under the rubric "In Brief": "Wings of the Dniester Region"]

[Text] Inventorying has begun at four airfields located on the left bank of the Dniester. It has been reported to a NEGA correspondent that after completion of the military inventory, 14th Army personnel will transfer these airfields together with their materiel to the possession of the PMR [Dniester-Moldovan Republic]. A bank account has been opened in the PMR into which those so desiring can make contributions to a fund for the development of the air force in the Dniester region.

Dniester Republic Thanks 14th Army for 'Support'

92UM1423C Moscow NEZAVISIMAYA GAZETA
in Russian 19 Aug 92 p 2

[NEGA report under the rubric "Facts, Events": "A Swan Is not a Raven"]

[Text] "The 14th Army will remain in the Dniester region at least another 100 years," Georgiy Marakuts, chairman of the Dniester Region Armed Forces, announced at a meeting commemorating the 50th anniversary of the army's establishment. "But I am not a raven with a hundred years to live," General Aleksandr Lebedev, army commander, joked in response. 14th Army companies treated those assembled to a ceremonial march.

Gratitude was expressed to the officers and enlisted men in the name of the government of the Dniester Republic "for the support and real assistance provided the young republic at a difficult time for us."

Karabakh Defense Committee Chief on Goals

92US0758A Moscow NEZAVISIMAYA GAZETA
in Russian 22 Aug 92 p 3

[Interview with Robert Kocharyan, chairman of the State Defense Committee of the Nagorno-Karabakh Republic, by Arsen Melik-Shakhnazarov: "We Are Ready to Meet Them Halfway"]

[Text] Robert Kocharyan was born in 1954. During 1987-1989 he was secretary of the party committee of the Karabakh Silk Combine. He left the CPSU in 1989. He is one of the leaders of the Karabakh movement. He is a deputy of the Supreme Soviet of the Nagorno-Karabakh Republic. Since 15 August 1992 he has been chairman of the State Defense Committee of the NKR [Nagorno-Karabakh Republic].

[Melik-Shakhnazarov] What was the reason for the creation of the State Defense Committee?

[Kocharyan] Armed resistance in Nagorno-Karabakh. After the withdrawal of the "third force"—the Russian troops—from our country, when Russia turned tanks, armored equipment, helicopters, and aircraft over to Azerbaijan, this turned into a real, full-scale, and bitter war against the Armenian population of 180,000. Today NKR residents have to defend not only their freedom but also their right to life in an unequal battle against the 7.5-million strong Azerbaijan with its great economic potential, which is reinforced with aid from Turkey.

The forms of administration of the republic that existed up to this point were intended for a peaceful life and were not adequate to the situation that developed. I am speaking essentially about overcoming the crisis of power: Our state structures have to be brought into line with the current stage of escalation of combat activities. It is possible to resist the many times stronger enemy forces only by concentrating and mobilizing all available forces and using them for the needs of defense. This is why the Supreme Soviet and the republic government considered it necessary to create an organ capable of enforcing martial law. Incidentally, the decision to create the State Defense Committee was adopted unanimously. Together we arrived at the conviction that it was necessary to rise above party interests and biases.

The State Defense Committee is not an organ of military power: Of its seven members, only two—the minister of defense and the commander of the armed forces—represent the army. In essence it is a National Rescue Committee.

[Melik-Shakhnazarov] Was the new organ of power created to replace structures that existed in the republic?

[Kocharyan] Martial law was declared in Nagorno-Karabakh for a period of six months and this determines the period of activity of the State Defense Committee as well. It has been granted broad authority, including all the functions of the Council of Ministers and part of those of the Supreme Soviet. Moreover, it has been granted additional rights necessary for introducing martial law. But the elective democratic structures—parliament and its presidium—have been preserved, and their activity will continue—true, with certain restrictions. The main task of the new organ is to protect the sovereignty and territorial integrity and to ensure the safety of the population of the NKR.

[Melik-Shakhnazarov] What is your position on peaceful regulation of the Karabakh conflict?

[Kocharyan] While defending the republic we will be searching for mutually acceptable paths to a peaceful resolution of the conflict. Any war ends in peace. The sooner this happens, the better for all concerned. Unfortunately, Azerbaijan is continuing to rely on force, thinking that through military operations it will succeed in driving out the Karabakh Armenians.

I am convinced that from official propaganda the Azeri people do not know that over the short period of time that has passed since the current president of Azerbaijan came to power, the Azerbaijan national army has lost through death and injury 1.5 times more people than during the entire preceding period of armed resistance. This is the price they have paid for the pre-election promises of the politicians.

The sooner the cease fire is declared and political regulation begins, the more lives will be saved on both sides. We are prepared to go halfway to an agreement.

[Melik-Shakhnazarov] In your view, what kind of contribution could the CIS, CSCE, and United Nations make to resolving the Karabakh conflict?

[Kocharyan] We cannot achieve a peaceful regulation today without an active intermediary mission of "third" parties. The military confrontation has gone too far. In our view, special responsibility lies with Russia. The deformations imposed by the communists during the Soviet period to not remove responsibility for it. We would welcome a more active role untying the Karabakh knot, which we were unable to cut during the course of the Rome meetings and which will have to be handled at a higher level by participants in the CSCE international conference in Minsk.

DEFENSE INDUSTRY

Support for Conversion From Missiles to Space

92UM1297 Kiev UKRAINA MOLODA in Ukrainian
No 44, 5 Jun 92 p 5

[Article by Stanislav Averkov: "A Celestial Slant for Conversion"]

[Text] *"There are still many Ukrainian politicians who have no idea what technology has been created in our state..."*

The official communiques on the latest launches of space vehicles or satellites came to us from Moscow for many long years. Today independent Ukraine simply has no moral right not to consider itself a space power.

Thirty years ago, literally on the eve of the Cuban crisis that put the world at the brink of war, the Soviet Union obtained a new form of armament—the R-12 long-range ballistic missile, which was a weighty argument in the confrontation with the United States. All of this, of course, took place under conditions of extraordinary secrecy. And only a narrow circle of specialists knew that the innovation (the SS-4 according to the U.S. classification), an appreciable step forward compared to the ballistic missiles in service at that time, had been designed at the design bureau of Sergey Korolev. An entirely autonomous control system was used for the first time that ensured the invulnerability of the R-12 to obstacles created by the enemy, and the new fuel components (this made it possible to serve in prolonged combat duty) and other advantages laid the foundation for a new type of troops for the Soviet Union—the Strategic Rocket Forces [SRF].

No one, of course, emphasized the fact that the wonder-missile had been created on the periphery in relation to the capital of Moscow—at the Dnepropetrovsk Pivdenne [Southern] Design Bureau [KB] and the Pivdennyy Machine-Building Plant Production Association [PMZ VO]. Clearly no one took such details into account, insofar as everything was a unified monolith—that is, Soviet.

But now circumstances compel a return to these events of thirty years ago, not just with the aim of deepening our store of historical knowledge, but also because we want to remind the thankless descendants of the victorious work whose fruits independent Ukraine simply does not have the right not to make use of.

But today we have to speak not of the military aspect (the era of the arms race, we will hope, will remain in the past), but rather the space aspect. Although the word "conversion" has been in our consciousness as a neologism of recent years, in reality the lucid mind started thinking about it as early as the beginning of the 1960s, when the question of creating space launch vehicles on

the basis of military missiles for the mass placement of various scientific and economic craft into Earth orbit was raised.

Thinking in the country was divided. Some people took into account that the development of a space rocket would divert effort from the fulfillment of the basic task of the government—the creation of strategic arms. But there were many who were convinced that the time would come when the necessity of arms would decline, and people would always need space.

The scientists of the Academy of Sciences also came out in favor of the creation of a launch vehicle for "light" craft. They were interested in performing many experiments in the Earth's orbital space to resolve a number of fundamental tasks—to study the magnetic and gravimetric fields, its thermal emissions and the ionosphere. The problems of putting instruments outside the boundaries of the atmosphere and ascertaining the effects of cosmic rays and solar activity on cosmonauts and the passengers of airliners needed resolution. American specialists, moreover, had started to work on conversion.

The subject of a "launch vehicle" found its place in the work of M.K. Yangel. His former first deputy, today an academician of the Ukrainian Academy of Sciences, V.S. Budnyk, recalls: "It was clear that there would not be enough energy in the single-stage R-12 to put a satellite into orbit, with a mass close to 500 kilograms, that could perform the tasks that the Academy of Sciences had placed before us. Yangel and I began to consider how to install a second stage on the R-12."

A new topic thus was born at the Pivdenne KB. The launch vehicle received the designation 63S1. The spacecraft was named DS-1, which signified the "first Dnepropetrovsk satellite." Deputy Designer V.M. Kovtunenok was assigned to be responsible for this project. The chief designer was V.O. Pashchenok.

The creators of the new rocket and craft were young and energetic. There were plenty of problems. The choice of flight path for the launch vehicle, for example, proved to be difficult. The chief of the design section, future Ukrainian Academy of Sciences Corresponding Member M.F. Gerasyuta, proved at the highest levels that a route proposed by Dnepropetrovsk ballistics scholars was the most optimal.

The design-engineering principles were strictly adhered to—simpler, more reliable, cheaper, faster. Documentation was transferred to the plant workers without delays. They manufactured the parts with the help of the designers, assembled the units and mock-ups and soon had the first prototypes of the launch vehicle ready for testing.

Towards the end of the summer of 1961, the launch vehicle was already ready for testing. Such a pace of development was unprecedented in Soviet rocket-building, both before and after the events described.

An expedition from the Pivdenne KB left for the Kapustin Yar cosmodrome in the fall of 1961. It was headed by V.M. Kovtunenکو.

A launch in a launch silo for an R-12 military missile had been set up in advance at the cosmodrome. Insofar as the launch vehicle did not fit completely into the shaft, its other stage and the azure superstructure could be seen from far across the steppe.

"The first launch of the vehicle was unsuccessful," recalled N.E. Zykov, responsible on the expedition for the computations connected with the ballistics and dynamics of the rocket's flight, "one of the instruments of the control system failed. That was tested so as to reveal all defects and get the rocket on track."

The defects were eliminated in the shortest possible time. The testing of the second rocket, however, was also unsuccessful. This time imprecision in the documentation had let them down. Only in March of 1962 did it become clear that the efforts of the great collective of rocket builders would be rewarded. The craft operated marvelously at the launch. The launch vehicle, tearing through a screen of clouds, raced upward. How elated the testers were when they heard through the radio communications, "We have separation of the object! Transmitter signals established!"

That signified that the craft being put into orbit had separated from the launch vehicle and had started operating. The long-awaited had been realized!

The launch vehicle had been given the name Kosmos, and the spacecraft Kosmos-1. The flight of a series of more than two thousand artificial heavenly bodies created by human hands began with that. The parents of the program were the Dnepropetrovsk specialists from the Pivdenne KB and the Pivdennyy Machine-Building Plant Production Association, as well as their colleagues from allied industries in Kharkov, Moscow, Leningrad, Kiev and other places.

The launch at the cosmodrome on 16 Mar 62 was supported by Yakiv Yeynovych Ayzenberg from Kharkov. He was then the chief of a section at the Elektropylad KB, where the automatic control system for the launch vehicle had been developed. Today he is the general designer and director of the Khartron NVO [Scientific Production Association], which creates highly advanced control systems for the missile and rocket sector. The latest development of Khartron is the control system for the Buran space plane.

Years passed. The space area in the activity of the Pivdenne KB, the PMZ VO and the enterprises associated with them broadened. Special space subdivisions were created.

A new launch vehicle for spacecraft was designed towards the end of the 1960s on the basis of yet another military missile, the SS-9. Its two-stage version was

tested by a team under the supervision of Leonid Danylovych Kuchmy—then a leading designer, and today general director of the PMZ VO and a people's deputy of Ukraine.

Today the whole world knows the new launch vehicles from Dnepropetrovsk, the Tsiklon and the Zenit, about the participation of our countrymen in the creation of the Energiya and about the new spacecraft from the shores of the Dnieper—the Interkosmos, the Okean and other satellites. Without them it would have been impossible to send ships into the most difficult conditions of the Arctic and Antarctic, to discover the location of the birth and development of typhoons, to conduct geographic explorations and to compose a map of our planet.

"We can say with pride that the Kosmos was discovered by Dnepropetrovsk people," Pivdenne KB general designer S.M. Konyukhov summed up the activity of the scientific and industrial giants of Ukraine.

"We can also take pride that Dnepropetrovsk, Kharkov and other places in Ukraine were at the origins of the birth of a new direction in science and industry—space."

It is all the more regrettable to realize today that space affairs in Ukraine are not as one would like them to be. The Pivdenne KB, PMZ VO and the other associated organizations and enterprises are ailing. More importantly, they have no space orders. And thousands of highly skilled specialists are thus threatened with dismissal. The lack of a well-defined program in Ukraine for the conversion of their prospects has so far not been described. It is hardly suitable to utilize all the advanced scientific, research, production and engineering potential of the giants of the space industry for the creation of trolleys, equipment for oils and fats production, wind-power installations and emulsifiers. An incomplete work day, many months of unpaid leave, declines in the level of technologies and cutbacks in staff from such conditions are simply inevitable. About a thousand people have been let go from the Pivdenne KB over the first four months of this year alone. The average pay for them is about two thousand rubles. And, in contrast to miners or teachers, even a strike won't scare anybody. Space is not coal, they say, without which you could even die.

A government commission from Kiev came to Dnepropetrovsk recently to ascertain what to do with the largest scientific-industrial center in the world. When its members were visiting the shops, the test benches and the laboratories, they said it had opened their eyes. There are still many Ukrainian politicians, government figures and deputies who have no idea what unique technology has been created in their state. The fact that many representative delegations have already come to the rocket builders since the removal of the ban on visits by foreigners to Dnepropetrovsk in 1990 is an instructive one. And the newly elected President of Ukraine also made one of his first trips to the Pivdenne KB and the PMZ VO.

The array of ideas of the collective is such, moreover, that their realization could be started today. The creation of a satellite system that would provide the opportunity of monitoring the ecological equilibrium of the whole planet, and in particular the radiation situation at any point on the globe, for example, or the satellite forecasting of earthquakes, the organization of efficient rescue operations with the aid of rockets for those stricken in a natural disaster, the production of the latest drugs and the detection of schools of fish in the ocean and so on.

And thus we simply do not have the moral right to squander such imposing potential. And right now, when the Kosmos program to which Ukraine had the most immediate of relations marks its thirtieth anniversary, one wants to proclaim it at the top of one's voice. Maybe they will hear it...

DOCTRINAL ISSUES

Russian Academy of Sciences Discussion of Nuclear Weapons, Strategy

92UM1322A Moscow VESTNIK ROSSIYSKOY
AKADEMII NAUK in Russian No 5, 92 (signed to press
12 May 92) pp 3-22

[Article by T.V. Mavrina: "Nuclear Weapons: New Approaches in the New Situation (Discussion at the Presidium of the Russian Academy of Sciences)"]

[Text] *This material being presented to the readers could not have appeared on the pages of the "open press" several years ago. A curtain of secrecy enveloped both the problems of nuclear weapons and the very creators of them. Today, many aspects of nuclear arms can be discussed candidly.*

On 14 January 1992, nuclear weapons issues were discussed for the first time at the Presidium of the Russian Academy of Sciences [RAN]: nuclear doctrine, antiballistic-missile [ABM] defense, non-proliferation of nuclear weapons, and preservation of intellectual potential of scientific centers studying the nuclear problem. There is tremendous interest in these issues in the world. It has evoked people's concern with the unstable situation that has taken shape on one-sixth of the world's land mass which just a year ago was considered a great nuclear power. This concern is what brought the creators of nuclear weapons and their delivery vehicles, developers of the antiballistic-missile defense, and military experts to the meeting hall of the RAN Presidium. The small hall had difficulty accommodating all those invited; some had to stand for more than 2 hours, which is how long the discussion lasted. Participating in the discussion were: Ye.N. Avrorin, scientific adviser of the All-Union Scientific Research Institute of Technical Physics of the Ministry of Nuclear Power of the Russian Federation and corresponding member of the RAN; A.G. Basistov, general designer and corresponding member of the RAN; B.V. Zamyshlyayev, corresponding member of the RAN;

Academician S.N. Kovalev, general designer; academicians M.A. Markov, Yu.S. Osipov, R.V. Petrov, and V.I. Subbotin; Academician A.A. Tupolev, general designer; Academician L.D. Faddeyev; and Yu.B. Khariton, scientific adviser of the All-Union Scientific Research Institute of Experimental Physics of the Ministry of Nuclear Power of the Russian Federation.

The discussion was opened by Academician Ye.P. Velikhov, on whose initiative it also was held: "It is natural to ask the question: Is this—the RAN Presidium—the right place to examine problems of strategic nuclear weapons and have we chosen the proper time for such a topic? I would remind you that the academy has been involved in the discussion of questions of strategic balance of nuclear forces since the mid-1950's, when the Pugwash Movement of Scientists for Peace, Disarmament, International Security, and Scientific Cooperation was formed. Later, the joint group of the U.S. National Academy of Sciences and the USSR Academy of Sciences was created for this same purpose and continues to operate today. But the main thing is that virtually all the specialists involved with nuclear weapons themselves, their delivery vehicles, and strategy of nuclear forces are in the Russian Academy of Sciences; therefore, discussion of these problems on a competent level is possible within its walls.

"Before, such problems were not examined at the academy, and scientists did not offer any recommendations in this area. Secrecy prevented that. Today we can discuss all these problems much more candidly. Incidentally, many U.S. publications describe in detail American nuclear systems, strategy, composition of forces, war plans, and so forth.

"As far as the time is concerned, it hastens discussion of the problems of nuclear weapons. Destruction processes in the former Soviet Union have resulted in four nuclear states appearing on its territory in place of one. Lately, interest in this problem has increased sharply, for understandable reasons. Meanwhile, neither the Supreme Soviet of Russia, nor the government, nor the president has a body for solving this problem. The government cannot get along without a qualified recommendation by scientists."

Nuclear Doctrine

Ye.P. Velikhov: I do not think that there is a simple answer to the question of how a modern civilized or semi-civilized world community perceives war. Of course, it is unnatural when the murder of one person is considered a crime, but war, where millions will die, is considered an accepted norm of actions of humankind. However, conventional war, to which humankind has somehow grown accustomed in a thousand years, radically changes if nuclear weapons are used. Thank God, we do not have such experience, but, according to all estimates, nuclear war turns into a phenomenon of collective suicide. It is not surprising that, in essence, neither we nor the Americans have a real nuclear doctrine.

Three official viewpoints of nuclear doctrine are known. One, apparently, was formulated by A.A. Gromyko on 19 July 1946 at the United Nations and later in more detail by M.S. Gorbachev on 15 January 1986. Its essence is that nuclear weapons must not be considered weapons; they are a means of suicide and, therefore, must be destroyed. M.S. Gorbachev identified the date of final destruction—1 January 2000. A plan of phased destruction of these lethal weapons has been proposed to our partners. It must be said that there is logic in such a posing of the problem, but it was not taken seriously by the world.

Another extreme viewpoint became widespread during the R. Reagan presidency. According to this viewpoint, humankind has grown accustomed to wars, and nuclear war is merely a variety of war to which it also will gradually become accustomed. There appeared theories such as limited nuclear war, exchange of surgical strikes, and controlled escalation. Third-generation nuclear weapons with very small or directed-energy weapons or of some kind of special effects must become the technical basis of this doctrine. This position evoked a powerful wave of resistance in the world and, naturally, was not accepted.

Finally, there exists a compromise viewpoint. Perhaps a few remember that in 1982, at the initiative of the Papal Academy of Sciences, a discussion was held in Rome on the idea of W. Weiskopf, a foreign member of our academy who worked at the Los Alamos Laboratory during the period of creating nuclear weapons. The discussion came down to the following. Nuclear weapons, as experience shows, are incapable of solving a single conflict. The only right of their existence is to deter the proliferation and use of nuclear weapons. The concept of nuclear deterrence has been developed. It gradually became the official concept both in the United States and in the USSR. When a fresh person becomes familiar with it, sharp resistance to it arises because this concept, despite all the obvious absurdity of the doctrine of nuclear war, appears even more amoral. According to the concept of nuclear deterrence, nuclear forces are aimed not at military installations but at peaceful cities. The civilian population (women and children) become hostages of nuclear deterrence. In general, this entire concept is rather contradictory. Attempts have been made to find a moral justification for it, but they have proved to be unsuccessful.

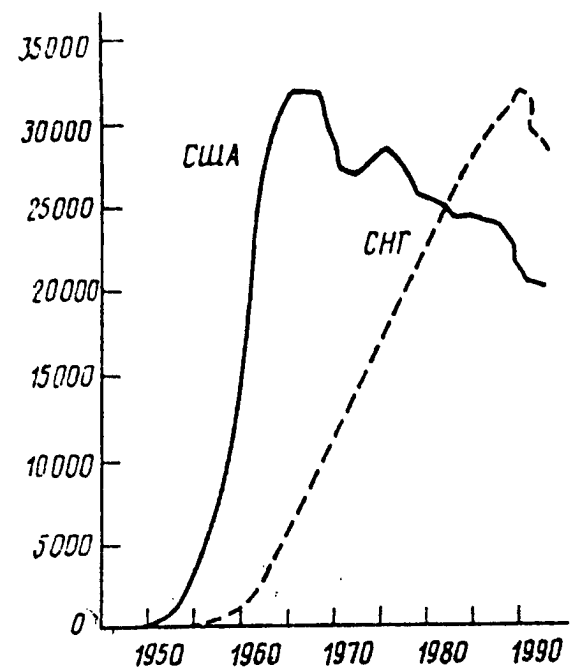
Whereas both we and the Americans officially state that we take the position of nuclear deterrence of one another, there is no mention of deterrence in either our or the Americans' secret war plans (some information has leaked to the press). It is sufficient to look at the present structure of nuclear weapons. This is a system of nuclear targeting of installations that are specified in war plans. There are about 1,500 such installations (mainly military strategic and industrial targets). According to rough estimates, it takes about three warheads to destroy a hardened target; therefore, their numbers have grown to an incredible amount in recent years. Today there are more than 50,000 warheads in the arsenals of the United

States and the CIS countries. Meanwhile, global climatic changes are beginning somewhere on the level of using several hundred.

Two events contributed to the sharp increase in the number of warheads during the 1950's-1970's. The first was the appearance of tactical nuclear weapons; the second was the creation of multiple warheads. Tactical nuclear weapons resulted in the total negation of the deterrence concept, since they have permeated all types of military armament, from artillery shells to depth charges. That is, they have become battlefield weapons. It must be said that the first adherent of tactical nuclear weapons was, strange as it may seem, R. Oppenheimer. He, unlike E. Taylor, who pushed for creation of a hydrogen super-bomb, believed that small warheads were needed for conducting military operations. To some degree, R. Oppenheimer turned out to be right, but as a result there are now more than 20,000 warheads each in the armies of the CIS countries and the United States. Incidentally, analysis shows that tactical warheads, unlike strategic nuclear weapons, are not subject to control from a central button.

Multiple warheads were invented in the late 1960's, when the Americans decided that the Soviet Union was beginning to deploy an antiballistic-missile defense. Multiple warheads were also designed to penetrate this defense. In 1972, an agreement was reached on limiting antiballistic-missile defenses, but the warheads had

Dynamics of deployment of warheads in the Commonwealth of Independent States and in the United States (CIS—broken line; USA—solid line)



already taken on a life of their own. Americans believed that they had seriously surpassed us in this type of armament. Indeed, they held an advantage for approximately 10 years, but then we caught up with and successfully surpassed the Americans. Our position (perhaps I am stating it somewhat primitively) was simple: we were to run with the Americans from nostril to nostril, lagging behind somewhat. And we ran until each army had nearly 30,000 warheads.

The system of strategic nuclear forces existing today includes various missiles: cruise missiles on strategic bombers; missiles with multiple reentry vehicles [MRV's] on submarines; intercontinental ballistic missiles with MRV's. When one missile has 10 multiple warheads (it is technically possible to have more), it is possible to destroy an entire country with such missiles. However, this entire system is not only dangerous but also unstable. Today, no one can guarantee that war will not begin in several minutes. Before, there was no sense in maintaining such a huge system of strategic nuclear forces, and there is especially no sense in doing so now, when the "cold war" has ended. Russia must work up some other reasonable nuclear doctrine.

Really, it is not at all necessary to have such an incredible number of warheads for deterrence. However, no one really knows how many of them are needed. If we recall history, during the Caribbean crisis, when J. Kennedy was deciding whether or not to begin a nuclear war, the possibility of one nuclear warhead falling on New York stopped him. R. McNamara, a thorough analyst, concluded that 400 warheads (1-megatonne each) would ensure total deterrence, since they would guarantee destruction of industrial potential. I would note that after Chernobyl we understand that this criterion is significantly too high. But it is still being used in our military calculations. If we proceed from this criterion, it is sufficient for each side to have approximately 1,000 nuclear warheads, that is, their number should be decreased by a factor of 30. Creation of multiple warheads has been recognized as a mistake, and the recent proposals of G. Bush recommend abandoning them.

Thus, all analyses of a stable configuration of deterrence talk about several hundred to a thousand warheads carried on simple delivery vehicles (for example, a light ballistic missile which weighs 10 tonnes and has a single warhead), aircraft, or submarines.

It must be said that the well-known designer A.D. Nadiradze, creator of the SS-20 missile, at one time cited quite a few arguments for placing nuclear warheads on small ballistic missiles. In this case, a stable configuration would look like this: light intercontinental ballistic missiles carrying one nuclear warhead. This limits the load being carried and penetration of the antiballistic-missile defenses, which increases stability of the deterrence forces. Incidentally, American experts came to approximately the same conclusion.

In the desire to achieve stability, we were forced to reject the idea of equality of our nuclear forces with the nuclear forces of the United States, France, England, and China taken together. It is clear that this equalization has a solution only if our and the American nuclear forces are nearly infinitely larger than the rest. If we go down to a small level, we must think about the multipolar world in which we do not at all need parity, but need only a guarantee that no one will attack us.

It seems to me that we should propose to Russia namely a doctrine of true deterrence of nuclear forces on a level of a minimal number of warheads and a simple missile. Unfortunately, development of such a missile has been terminated. Meanwhile, creation of different types of missiles, bombers, submarines, and so forth was leading to incredible spending and dispersion of funds. You know that our submarines cruise poorly and that our strategic bombers will probably not reach the United States. Therefore, it seems to me that we need to concentrate our efforts on developing a simple and reliable delivery vehicle for nuclear warheads and propose on its basis a doctrine of nuclear deterrence and configuration of nuclear forces. Of course, a mandatory condition here is the complete destruction of tactical nuclear weapons. Apparently, the Americans are, to some degree, ready for these proposals.

A.A. Tupolev: Yevgeniy Pavlovich [Velikhov] said that strategic bombers have a small operating radius and will not reach, for example, America. But there is no need for that now: all bombers carry missiles. The latter are able to fly several thousand kilometers and automatically hit the target. These missiles have an advantage over ballistic missiles since they are an order of magnitude smaller. That means it is easier for them to penetrate an air defense configuration or other antiballistic-missile defense.

Bomber platforms can carry both nuclear and nonnuclear missiles. Incidentally, it is not difficult to convert a nuclear missile into a nonnuclear missile by replacing its warhead with a conventional warhead. Taking this into account, the military doctrine should specify that not a single bomber platform that the CIS countries presently have be destroyed if nuclear weapons are banned. These platforms can be used successfully in local conflicts. During the Persian Gulf War, the Americans made extensive use of B-52's with nonnuclear weapons. I will reemphasize: bomber platforms are not under any circumstances money thrown away, regardless of whether or not atomic weapons are banned.

M.A. Markov: I worked in the Pugwash Movement for a number of years, and disarmament problems were the subject of our discussions.

Initially, I would remind you of Einstein's viewpoint on this problem. In 1947, in responding to a letter, Einstein remarked that there can be no victory in a nuclear war. Therefore, it is necessary to do everything to hinder nuclear competition, to move from mutual threats to

agreements, and to make this new thinking the principle of international cooperation. In the 1950's, in examining the doctrine of nuclear deterrence, Russell wrote: "Deterrence is all right only if nuclear weapons are not used. Wouldn't it be wiser to destroy nuclear weapons altogether?"

Studying this problem several years ago, I posed the following problem task to myself. If there formally are two sides (let us assume the Warsaw Pact and NATO) and each strives for peace and proposes some kind of solutions, but in doing so treats the other side with suspicion, what paths are possible? I examined several variants, and one which I very much disliked was this: let one very strong world power exist keeping peace on earth with its might. A.D. Sakharov at one time supported this viewpoint. He believed that the United States should be such a power, but we had significant differences with him in this connection.

It seems to me that if the United States develops an antiballistic-missile defense successfully, it will essentially become the power determining the situation in the world. Maybe I am wrong, but such a trend now exists. I think we should take Einstein's viewpoint: a desire for total nuclear disarmament. We need to prevent the proliferation of nuclear arms to various countries and agree on their total destruction. In my opinion, there is no other way.

S.N. Kovalev: I think that the RAN Presidium must be very thorough in its opinions and recommendations regarding nuclear weapons. We have broad experience of a frivolous attitude towards very serious things. Let us recall the naive notions about the benefit of conversion or the insufficiently thought out proposals on arms reductions, according to which if an aircraft carrier was not built somewhere, people would have so many billions more in money. In actuality, everything is happening the other way round. Millions of skilled specialists are left without jobs or underworked, unique equipment stands idle, production cooperation is collapsing, and enormous sums are being spent with no return. If this is conversion, then what is diversion?

Today, we are seeing an uncontrolled, wild spread of conventional weapons both throughout our country and other countries, with tragic consequences. Everything that once was in military depots has now ended up in the hands of criminals and is beginning to be fired. Heaven forbid if the same thing were to happen with nuclear weapons. But such a danger certainly exists. That is exactly why we must develop a scientifically sound concept of nuclear forces. I disagree with Academician Velikhov that our present nuclear weapons and their delivery vehicles are not sufficiently good and reliable and therefore we should develop a new small missile that will be very reliable and, moreover, satisfy the current nuclear doctrine to the maximum extent. Before creating such a terribly reliable missile, we need to take care of

the huge nuclear arsenal which we have today. It poses a danger not only to the outside world but also to ourselves.

In difficult climatic conditions with an enormous supply shortage, material-technical as well as food, housing, and what not, sailors perform incredibly difficult duty to maintain strategic submarines, with their atomic reactors and nuclear weapons, in good working order and in combat readiness. I speak of the Navy since its problems are closer to me. And if the idea were to dash out of this beautiful office into the wide world that we do not need the Navy very much and that we need something else that corresponds more to the nuclear concept that is being developed, imagine what kind of accidents would follow in the Navy.

I think that if we want to give recommendations to our political leadership, we should, above all, direct its attention to the fact that strategic nuclear weapons (be they underwater, land, or air) are our great property which once played (and, apparently, continues to play) a definitely positive role in normalization of the international situation. The conditions have changed today, and these weapons must be reduced in accordance with agreements. How much? That is another matter. Naturally, if we call 1,000 warheads the optimum number, it is quite obvious that it is simply technically impossible to achieve such a reduction overnight. A consistent arms reduction is justified from both the strategic (obviously we should not disarm ourselves "ahead of the entire planet") and the technical standpoint. Let us assume we would want to withdraw the entire strategic fleet from action. Such an act would turn into a tragedy not only for the shipbuilding industry and industry in general, but also for the state as a whole.

I, evidently like everyone in attendance here, am an advocate of total destruction of nuclear weapons. However, such a decision should be implemented gradually, ensuring combat effectiveness and the highest security of storing and maintenance of our entire strategic nuclear potential. I think that this thought today is the primary one, for if we lose touch with what we have, we will come to nothing other than a catastrophe.

As far as the quantitative aspect of further arms reductions is concerned, at the SALT-1 and SALT-2 negotiations with the United States, with both sides having a multiple excess of arms, we stipulated conditions under which each side would not be able to gain an advantage of either a single missile or single warhead. Now, when we are talking about a minimal parity composition of strategic forces, arbitrary numbers of warheads are being taken out of the air without any justification. I think that the lower the quotas, the more serious the arguments must be. And we and the United States are not the only ones living in the world. There are also other countries interested in our military potential.

A.G. Basistov: First of all, I want to emphasize that additional detailed research is needed to develop a stable

balance nuclear doctrine. Only based on this research can we propose to the government practical recommendations for nuclear arms reductions. The primary purpose of the research is to determine the conditions under which not a single great power could rise, that is, could become even more powerful militarily as a result of these reductions. All the measures being proposed must be aimed at suppressing the aspirations of some country to become a super-power possessing such an arsenal of weapons that would not be counterbalanced or deterred by anyone or anything. If the decision were to be made to limit the number of nuclear weapons to 1,000, for example, then we must clearly imagine what kind of peace there would be and how we could maintain its stability in these conditions. I am in favor of reducing the number of nuclear weapons to 1,000 for all the great powers, but am opposed to destroying strategic delivery vehicles for nuclear weapons. We dealt with medium- and shorter-range delivery vehicles absurdly to the extreme. The nuclear weapons all survived, but the delivery vehicles, possessing a unique firing accuracy and, incidentally, also capable of carrying conventional weapons, were all destroyed. We will still return to the need to possess nonnuclear weapons with a high degree of firing accuracy and able to penetrate any defense easily.

B.V. Zamyshlyayev: I do not think you will find a single person in our society who would favor keeping nuclear weapons. But we must proceed from realities. And the realities are such that whereas recently the development of nuclear weapons took place in conditions of a bipolar world, that is, there existed confrontation between the USSR and USA which led to a nuclear arms race, now not only France, England, and China but also a number of other countries have these weapons. These countries already number about 10 and will number 20 in the near future. Thus, we have gone from a bipolar nuclear world to a multipolar one. In this situation, a total reduction of nuclear weapons on the planet in the next few years becomes unrealistic. So, nuclear weapons will be kept for some time to stabilize the world (the United States is also interested in this) in order to have the ability to cut short any acts of nuclear sabotage and extremist attacks.

Following the adoption of a defensive nuclear doctrine in our country, nuclear weapons are also considered a weapon of deterrence. And herein lies the contradiction to which Academician Velikhov called attention. On the one hand, these are weapons of deterrence, strategic weapons, but on the other hand, they are tactical weapons designed for waging wars and frontal battles. This contradiction must be eliminated. The proposals by G. Bush and the response to them by M.S. Gorbachev are intended to eliminate it.

Since the main function of nuclear weapons is to stabilize the world, there is a natural question: At what number of nuclear warheads is this stabilization achieved? So far, all concepts being developed both in our country and in the United States proceed from a minimum number of weapons which are needed in a

retaliatory strike against countries exerting pressure by force. In response to a nuclear strike, we must inflict unacceptable damage on the aggressor. What are the standards? We can talk about one nuclear weapon over New York, or maybe 400-500 weapons which will inflict definite damage on the enemy's military-industrial potential. It may also prove to be unacceptable. Military installations are also among nuclear targets. True, I do not understand, why we should plan a retaliatory strike against military installations which are not accomplishing anything? But a certain number of weapons, which it is necessary to have as a minimum, are for these plans, and as result, the reduction in nuclear arms is held back. It seems to me that we should, first of all, state more precisely the standards of unacceptable damage for which we must possess the capability to inflict in a retaliatory strike.

Studies conducted so far show that if we make further reductions in strategic nuclear forces, with the presence of a deployed U.S. antiballistic-missile defense (not even space or nuclear) we will not be able to make a retaliatory strike unless we create warheads that can effectively penetrate it. Thus, the possibility of a further reduction compared to what is now planned makes no sense for the time being. A thousand warheads is not enough for nuclear deterrence.

Today we have nuclear parity with the United States and, it would seem, can take the step of reducing nuclear weapons. Before, however, we reduced them and created new ones to take their place. Some kind of foolishness was in the arms reductions talks which were earlier and now. Today the state of the economy is such that we will not be able to create anything new during the next few decades. Therefore, nuclear arms reductions must be accomplished, first of all, on the territory of three independent states—Ukraine, Belarus, and Kazakhstan. Then we should determine the minimum number of nuclear warheads which will ensure us (provided that our weapons are not improved in the next few decades) the capability of inflicting unacceptable damage on an aggressor in a retaliatory strike. And we should make arms reductions only to this minimum. But additional studies are needed, taking into account the political changes in the world, to determine this minimum. We must ask the government to allocate specific-purpose financing for this scientific research work so there are no new expenditures when making the arms cuts.

The question of the impermissibility of using operational-tactical weapons in front operations is posed absolutely correctly. A year ago, we studied a front operation scenario that was planned by the General Staff of the USSR Armed Forces and NATO countries in the event of a regional nuclear conflict. The number of weapons to be detonated in the region of the front operation leads to the death of approximately 30 percent of the population here, and all radioactive contamination associated with the detonations moves in our direction. To prevent the possibility of employment of nuclear weapons in regional conflicts, we should have weapons of deterrence

that are capable of inflicting a retaliatory, preemptive strike against individual rear areas or industrial installations. Thus, operational-tactical nuclear weapons and bomber platforms must be retained in a limited number as weapons of deterrence with respect to countries having nuclear arms.

Ye.N. Avrorin: Naturally, mankind has the desire to eliminate nuclear weapons. There is probably not a single person who would protest against such a decision as an ultimate goal. But no one knows how much time will pass before the total destruction. Certainly, the year 2000 is unrealistic. Nuclear weapons will still exist for some time, and optimization of Russian (and, obviously, American) nuclear weapons is necessary—both qualitative and quantitative.

Academician Velikhov said that about 1,000 nuclear weapons are sufficient for deterrence of nuclear forces. This estimate seems reasonable, but the decision about the quantitative and especially the qualitative composition of nuclear weapons requires a deeper analysis. It needs a detailed examination of various situations with the use of mathematical modeling methods. As a result, it may turn out that the optimum number is closer to 500 instead of 1,000, or may be closer to 2,000 weapons. Certainly it is necessary to reduce the types of strategic nuclear weapons. But should we, as Velikhov proposes, leave one type of nuclear weapon or achieve a more stable configuration with two to four types of weapons? This question needs to be studied further.

A few words about optimization of nuclear weapons themselves. As you surely know, in the event of a serious accident, modern nuclear weapons can disperse plutonium and other radioactive materials. Today we have the technical capability to create much safer nuclear weapons that do not cause (practically) dispersion of radioactive materials even in a very serious accident. Unfortunately, due to the repeated formal and informal moratoriums on nuclear testing, we have lagged behind very much in studying this problem. Americans have gone far ahead here.

I want to suggest conducting, under the aegis of the Russian Academy of Sciences, purposeful research on the quantitative and qualitative optimization of nuclear weapons for the period that they will be remain on the planet. Simultaneously, proposals on nuclear disarmament talks should also be formulated.

R.V. Petrov: Yevgeniy Pavlovich [Velikhov], in what condition are U.S. nuclear test ranges?

Ye.P. Velikhov: The "Nevada" test range, I think, is in excellent condition. I have not been let in there. I flew around the range when I was involved in inspecting seismic safeguards of nuclear testing. I know only that the number of tests has been reduced sharply, but they do continue.

Ye.N. Avrorin: In December 1991, I was at the Nevada range and participated in the work on monitoring

nuclear detonations in the United States. The range was functioning normally, although our peace initiatives have had a serious effect on the American nuclear program. They have reduced the number of tests noticeably compared to 5 years ago. But they are still being conducted, and the range is fully operational despite public protests.

Antiballistic-Missile Defense

Ye.P. Velikhov: At one time, A.N. Kosygin, meeting with U.S. President L. Johnson, talked about our plans for building an antiballistic-missile defense. Johnson was horrified, but A.N. Kosygin stated firmly: defense is moral; attack is immoral. In the nuclear age, such an assertion is incompetent. Antiballistic-missile defense is ineffective, but if huge amounts of money are invested into it, it has a destabilizing effect on the strategic balance. This is not hard to understand: it is one thing to create a defense against first strike, when all the enemy's nuclear forces are on hand, but it is another thing to try to influence somehow the intensity of a retaliatory strike. Such an attempt adversely affects the policy of deterrence of nuclear forces.

As we know, a treaty limiting the creation of an antiballistic-missile defense was signed in 1972. However, after the war with Iraq, the U.S. administration, under pressure from laboratories, primarily Livermore (a specialized nuclear weapons laboratory of the U.S. Department of Defense), and designers of delivery vehicles—a number of large corporations—accelerated the creation of an antiballistic-missile defense (true, as they say "dispersed") against a single missile or an unauthorized missile launch.

Two variants of an antiballistic-missile defense are proposed. One variant, supported by the U.S. Congress, calls for a land-based system. This is something like a "Super-Patriot," a system which Academician B.V. Bunkin is developing. He demonstrated it in Paris and is willing to sell it even to the Americans. The other variant, called "Brilliant Pebbles," is a space-based system. Thousands of small missiles with very complicated modern electronics combined with optical sensors are located on satellites flying in low orbits (about 700-1,000 km above the earth's surface). They form an integrated system for analyzing the situation and striking a missile being launched. Now the Livermore Laboratory is pushing for the creation of such a system. Congress, fortunately, opposes it, since in 1983 we made the decision on a moratorium on deployment of satellite- or any other space-based weapons.

You can imagine how countries will react if space—the only place where there are no weapons today—ceases to be such. Remember the U.S. reaction to the placement of missiles in Cuba. If there are nuclear weapons at an altitude of 800 km above people's heads, their reaction will be even more severe. The appearance of weapons in space is a grave and dangerous moment, an historical line which we do not want to cross. It seems to me that

it is better to adhere to the 1972 ABM Treaty. If the Americans are very insistent on creating a local defense against individual missiles, we must discuss this problem and firmly oppose the deployment of an ABM defense in space.

Yu.B. Khariton: I want to call attention to the fact that U.S. specialists are working stubbornly on a nonnuclear ABM defense system. Meanwhile, we well know that we lag behind not only the United States considerably in this area but also a number of Asian countries that produce high-level electronics. It seems to me that the academic institutes studying problems of electronics should maximize efforts to overcome this lag.

A.G. Basistov: Most recently, the doctrine of nuclear deterrence "by threat of retaliation" has been supplemented by another important detail which, for some reason, Academician Velikhov failed to mention. The U.S. President formulated a doctrine of preventing war or terrorism by "defense and retaliation," not just "retaliation." This formulation indicates the exceptional importance of ABM defense. The United States is investing the lion's share of appropriations into a program of developing ABM technologies. Such a system will be able to use nonnuclear means to accomplish considerable tasks. And the main one is to defend any victim of aggression against ballistic missile strikes from any aggressor besides, of course, a great power. This system is designed to defend any region of the globe against a limited number of short- or medium-range ballistic missiles and the territory of the United States against intercontinental ballistic missiles with up to 200 warheads in a strike.

We have been studying an ABM defense for more than a decade, and I must say that the first stage of the Strategic Defense Initiative and especially the Global ABM Defense against a limited strike are not mythical projects but realistic tasks at the level of today's technology. Yevgeniy Pavlovich [Velikhov] said that according to some estimates, it is sufficient to have 400 warheads to deter a nuclear conflict. Meanwhile, the ABM defense which the United States may create by 1998 will be able to intercept and destroy 200 warheads. Thus, how many warheads on strategic platforms must we have then for effective deterrence of a nuclear threat without possessing an ABM defense on our territory? It is extremely important to clarify this.

Today, the ABM Treaty is a bilateral treaty. Now, I believe, it must become multilateral, involving all five powers who are permanent members of the UN Security Council. The point is that an ABM system, if possessed by one side, will become a powerful destabilizing factor, and it is impossible without it either to protect oneself or to achieve balance.

What is the relation of costs today for creating an ABM system against intercontinental ballistic or long-range ballistic missiles with a limited number of missiles in a

strike? I say limited because the system has the characteristic of becoming quickly saturated and disintegrating if its capabilities are exceeded. Thus, within the limits where it is not yet saturated, the relation is such: for defense against intercontinental ballistic missiles (long-range ballistic missiles), it is 10-20 units of cost of the defending side per unit of cost of the attacking side; for defense against medium-range ballistic missiles, it is about 5. The ABM system here will shoot down 7-9 of 10 ballistic missiles. The great powers can permit themselves such a luxury; others cannot. If the United States creates an ABM system, there can no longer be any talk of parity. Many countries will also lose both security and the ability to protect themselves even against political pressure. We will not solve the problem of security in the world but will make it worse if we continue to restrict the development of an ABM defense against medium- and short-range ballistic missiles since we are not halting the spread of them. Of course, it will be easier to breathe if there are no nuclear or chemical weapons on these platforms.

B.V. Zamyshlyayev: It was inconceivable to engage in creating a multi-echelon ABM defense in our country even in the past when the entire economy was based on defense. It is even more so now. That means we need new warheads with an increased capability of penetrating an ABM defense. But they work only when missiles carry multiple reentry vehicles. It turns out that we so far do not have any effective measures in response to development of a U.S. ABM defense.

In the multipolar nuclear world in which we now live, the need arises for an effective defense against terrorist missile launches. We need to begin negotiations with the United States on joint creation of such a defense; therefore, the development of defensive nuclear weapons in the future should remain the subject of our research.

Finally, I believe we need specific-purpose financing for the development and improvement of the strategic nuclear weapons necessary for creating an ABM defense, as well as for maintaining a program for safe operation of these weapons in regulated and unregulated conditions.

Non-Proliferation of Nuclear Weapons

Ye.P. Velikhov: Lately, the problem of proliferation of nuclear weapons has become extremely critical for us, since today on the territory of the former Soviet Union these weapons are located in four independent states—Russia, Ukraine, Kazakhstan, and Belarus.

Russia has approximately 4,000 warheads on intercontinental ballistic missiles. There are about 1,000 of these missiles; consequently, many of them have multiple reentry vehicles. There are 2,804 warheads on submarine-launched ballistic missiles and 367 on heavy bombers. Ukraine has a considerably smaller number of MRVed intercontinental ballistic missiles and heavy

bombers. Kazakhstan has MRVed intercontinental ballistic missiles; and Belarus has missiles with single warheads. Such is the situation with the proliferation of nuclear weapons on the territory of the former Soviet Union.

The question arises: To whom do these nuclear weapons belong? True, Ukraine, Kazakhstan, and Belarus have stated that they want to be nuclear-free states and are willing to destroy nuclear weapons within some acceptable time period. Will they destroy the weapons themselves, with the aid of Russia or the world community? The U.S. Congress has allocated \$400 million for technical assistance to the former Soviet Union in disarming nuclear warheads and transferring them to secure storage facilities for disassembly and subsequent destruction.

Can Russia assume responsibility for eliminating nuclear weapons in the independent states by agreement with them, or should these functions be passed to an international agency? It seems to me that it is important to have an international agency, for the question of destroying nuclear weapons in the former Soviet Union has already become an international one. And if we involve interested influential partners in this process, we

will gain not only additional material advantages but also a moral force of pressure at the negotiations, which probably will be quite difficult.

An international agency is able to assist in resolving two additional issues, above all, the issue of horizontal non-proliferation of nuclear weapons. Monitoring it again brings us to the international level. Presently, only enterprises for the enrichment of uranium, thorium, and plutonium are located on the territory of Russia; the enterprises which mine uranium are located on the territory of other independent states. The Baruch Plan back in 1946 proposed creating an international agency for the development of atomic energy which would completely control the exploration, mining, refining, and enrichment of uranium, thorium, and plutonium. It was planned to internationalize within its framework both the knowledge and the technology of manufacturing nuclear weapons. For known reasons, this plan, submitted to the United Nations, was rejected by our country. But now it would be interesting to return to it. And not only because the question of the uranium enterprises of the former Soviet Union must be resolved on an international level. It would be advantageous for Russia to develop cooperation in this area.

Disposition of Strategic Offensive Arms on the Territory of the Commonwealth of Independent States

Country	Type of Strategic Offensive Arms	Number	
		Delivery Vehicles	Weapons
Russian Federation	ICBM's	1064	4278
	SSBN's/SLBM's	62/940	2804
	Heavy bombers	101	367
Ukraine	ICBM's	176	1240
	Heavy bombers	21	168
Kazakhstan	ICBM's	104	1040
	Heavy bombers	40	320
Belarus	ICBM's	54	54

Legend: ICBM—intercontinental ballistic missile; SSBN—nuclear-powered ballistic missile submarine; SLBM—submarine-launched ballistic missiles

An international agency can help us sell on the market our huge capacities for raw uranium and its refinement. Unfortunately, our quota on the international market is very small, less than 5 percent, but we could count on 40 percent. Naturally, the West will oppose this. Maybe we would be able to link solving the problem of horizontal non-proliferation of nuclear weapons (which is in the West's interests) with increasing the quota for sale of uranium on the world market. In this case, we would receive a huge economic gain.

V.I. Subbotin: I am very frightened by the possibility of theft of nuclear fuel, quite likely in our conditions today. It is enough to spill the plutonium and, as they say, we die together. With the lessening of defensive safeguards, there is an increased threat that we can end up in the hands of terrorists.

Ye.N. Avrorin: I am surprised that we have not heard an answer here to the question of ownership: Who owns the nuclear weapons located on the territory of Ukraine, Kazakhstan, and Belarus? Political as well as technical considerations dictate the only correct answer: the nuclear weapons must be the property of only Russia. If this property were to belong not to Russia alone, this would violate the treaty on non-proliferation of nuclear weapons—instead of one nuclear country, there would appear four. Only Russia has the specialists who can maintain nuclear weapons in a combat-ready state, ensure their safety and reliability, and know how to dismantle them. Only Russia has the ability to store the nuclear materials freed as a result of elimination of nuclear weapons. Russia must structure mutual relations with the weapons that are located on the territory of other CIS countries on the same grounds as the United

States did in stationing nuclear weapons on the territory of Germany and other countries.

Eliminating nuclear weapons is a very serious problem which specialists must solve. It is naive to think that some international agency can eliminate our nuclear weapons. Detailed knowledge of the design is needed in order to destroy them safely. Our specialists would not undertake the destruction of, say, American nuclear weapons, nor would American specialists undertake the destruction of ours. This can lead only to another Chernobyl. The people who developed the weapons must be involved in eliminating them. If we are talking about nuclear weapons on the territory of the former Soviet Union, only Russian specialists can destroy them.

It was already mentioned here that the U.S. Congress passed the decision on allocating \$400 million for the elimination of our nuclear weapons. There are no restrictions in this decision that only American companies conduct this elimination; on the contrary, there is an indirect indication of the possibility of passing the funds to Russian specialists. For example, it contains a wish that these expenditures be fully or partially reimbursed using various resources of the former Soviet Union. It directly names oil, strategic materials, and other natural resources.

V.I. Subbotin: It seems to me that a national program for using the freed nuclear fuel should be created.

Yu.S. Osipov: From all appearances, this is the main problem.

Preserving the Intellectual Potential of Nuclear Laboratories

V.I. Subbotin: In my opinion, not enough attention is being given in our discussion to what is called the "human factor." If we destroy unique institutes in Arzamas or Chelyabinsk, we will never have such institutes. There are unique cadres concentrated in them, and a great deal of money has been invested in their material and technical base. Of course, we must see to it that the main subject matter of these institutes is peaceful.

Ye.P. Velikhov: We (and the West, too) are extremely concerned about the possibility of losing Russian scientists, engineers, and developers who have, so to speak, an intimate association with nuclear weapons. A number of countries are ready to offer any wages to get them.

It must be said that the problem of a "brain drain" from the nuclear laboratories of Arzamas and Chelyabinsk is not new. This process began 20 years ago, and the Academy of Sciences here also had a hand in it. To stop it, we need to create not only a comfortable life for scientists but also conditions in which they could productively engage in scientific work. An appropriate experimental base is needed namely where these laboratories are located. In continuing nuclear testing, the Americans have prepared a plan (and are financing it) on how to live without these tests. Unfortunately, we have

no such plan. We should recommend to the Russian government to treat in a most serious manner the problems of developing an experimental and scientific base of our nuclear laboratories and supporting their intellectual potential. It is advisable to enter into talks with the world community on cooperation in this area.

Ye.N. Avrorin: The western press is now widely discussing a question: Will our nuclear weapon specialists run to Qadhafi, Hussein, or some other potential aggressor? To keep this from happening, we need support of their work, not handouts or simply ensuring a minimal material level for scientists. Science-intensive proposals on so-called "conversion" activities have been developed in our nuclear institutes. Certainly these activities must be supported both directly by the state and by commercial structures, to which the state can grant some kind of privileges. Later on these structures will profit from the conversion activities, but for now they must make some expenditures.

L.D. Faddeyev: This is the first time I have been at a conference where there has been so many general designers and where truly vitally important problems were discussed. But it seems to me that the esteemed general designers are still thinking in the old way: we must retain so many bombers, so many missiles, so many aircraft carriers, so many submarines, and if we lose this, what will people do? The arms race has already devastated our country; let us proceed from that. And I cannot understand, why will something terrible happen if we do not build a missile aircraft carrier? Well, this money will not increase, but it also will not be taken away! I think the RAN Presidium should work out a humanitarian viewpoint of the nuclear problem and appeal to the general directors to somehow rise above their local interests.

Yu.S. Osipov: Of course, today's discussion has not exhausted such an exceptionally important topic as nuclear arms. I want to thank Yevgeniy Pavlovich Velikhov for posing it at the meeting of the Presidium and the specialists for participating in the discussion. The Russian Academy of Sciences has to work seriously on this extremely important problem in order to propose scientifically sound recommendations to the government.

Postscript. On 29 January 1992, Russian President B.N. Yeltsin appeared on television with the statement "On Russia's Policy in the Area of Arms Limitations and Reductions." It states Russia's fundamental position: nuclear weapons and other weapons of mass destruction in the world must be destroyed. It expressed the idea of creating an international agency for ensuring a reduction of nuclear weapons. It is assumed that this agency would monitor the entire nuclear cycle—from mining of uranium, production of deuterium and tritium, to burial of waste. The statement contains proposals on further arms reductions. However, these proposals, as B.N. Yeltsin

emphasized, "do not in any way undermine the defensive capability of Russia and the states of the Commonwealth. This involves namely a *reasonable minimum sufficiency* of nuclear and conventional weapons."

On 31 January, speaking at the UN Security Council, B.N. Yeltsin proposed transforming the American Strategic Defensive Initiative program into an international project, taking into account the technological developments of Russia's defense complex. The global system of protection against a nuclear missile strike should be deployed both on earth and in space. B.N. Yeltsin proposed creating a quick-response mechanism which the UN Security Council could effectively activate in any region of the planet where a threat to peace and stability arises.

On 28 February, a decree of the President of Russia was signed on organizing two federal nuclear scientific centers based on the all-union scientific research centers in Arzamas-16 and Chelyabinsk-70.

Doctrine: All-Round Defense vs Prioritization of Threats

924P0171A Moscow NEZAVISIMAYA GAZETA
in Russian 18 Aug 92 p 4

[Article by Valentin Larionov: "Mistake on the Strategic Map; It Could Be Expensive for Russia, Which Is Developing a New Military Doctrine Today"]

[Text] There have been recent indications that the agonizing process of the development of new structures of Russian armed forces, the clarification of the new outlines of military doctrine, and the choice of new priorities in military-technical policy is coming to an end. This was announced by Russian Defense Minister Pavel Grachev and his first deputy Andrey Kokoshin. This news can only be applauded. Although the decisions to be made in these areas are extremely important, and although excessive haste in making these decisions could lead to mistakes, the process cannot go on forever.

The professionals in the military, whose future will depend wholly on military reform, are not the only ones who are showing their impatience. The general public has become directly involved in the debates. Two major scientific conferences, attended by foreign specialists, were held in the Military Academy of the General Staff in June and July, and they were followed by another conference in the Russian Academy of Sciences. All of them were concerned to some extent with questions of military policy.

These issues are also being discussed widely in the news media. In particular, NEZAVISIMAYA GAZETA initiated a discussion of the nature of the military threats to the state, which might be useful in revealing the prevailing views in our society and in a broader context.

One vivid example is the new controversial article by Daniil Proektor, "Whence the Threat?" (NEZAVISIMAYA GAZETA, 21 July 1992). After stating his opinion that the "main threat" has moved inside the CIS, the author proceeds to discuss a broad range of issues: How we can climb out of the abyss of ethnic and religious conflicts, what kind of danger they pose to Russia, Europe, and the world, and how we should form new alliances in order to avoid a new phase of the cold war.

We should start by discussing this. Even though I agree with the author that internal conflicts are dangerous, I disagree completely with his opinion that there is "absolutely no basis" for concern about external threats. After all, these are not limited to the now defunct threat of an American missile strike or the probability of a Bundeswehr attack on Russia.

Let us take a closer look at those internal conflicts. Are they not spilling over our border, and might they not pull external forces into the whirlpool of events? These conflicts are not the only reason for the hysterical demonstrations in front of the television stations, which are held for completely different purposes.

Can we be indifferent to the crescent of instability that has taken shape to the south and southwest, in near and distant foreign countries? Besides this, the Russian army will be expected to participate in peacekeeping operations and in measures to stop aggression for the maintenance of peace and stability within the CIS and beyond its borders.

Although I agree that defensive structures should be ready to perform external functions, I cannot agree with the formula of "defense in all directions," which was declared in Proektor's first article. "In all directions" means nowhere in particular. Given Russia's 60,000 kilometers of border, this is a crude and primitive approach that has nothing to do with territorial security. A. Kokoshin was right when he said in an IZVESTIYA interview that Russia rejected the principle of defense "covering the full extent of the border." External threats also have to be classified in order of importance.

Now we should discuss the strategic landscape of Europe at the end of this century. It is true that it might be distinguished by unpredictable conflicts, the massive regrouping of forces and, I would add, the disruption of the present equilibrium, but there are also obvious elements of integration and of interaction by countries and nationalities, even within the still shaky Commonwealth of Independent States.

Some examples of this are the Tashkent treaty on mutual security and several bilateral economic commitments. Tripartite agreements were concluded on the conflict in Southern Osetia and in the Dniester region. These agreements could serve as examples to follow in other hot spots in the CIS. It might be time to start picking up the pieces.

This is quite natural. The collapse of all empires in history was always accompanied by the efforts of certain ethnic strata to unite and even to integrate. Besides this, we are witnessing the convergence and unification of states within the CSCE structure. Proektor believes that the European Union and NATO will "draw" Russia into their orbit in time. According to him, this must not be resisted. On the contrary, we must make every effort to be accepted for membership in this club. In connection with this, our military organization and our military doctrine should, in his opinion, correspond completely to this possibility. In other words, they must be duplicates of foreign models.

I beg to differ: We can, after all, become part of the European and global systems of strategic stability without being "drawn into NATO" and without adapting our doctrine. First of all, Russia is Asian as well as European. Second, the inequality of our economic situation today will make us completely dependent on the Western countries. Our military organization must be highly flexible, corresponding to the current strategic situation and the capabilities of our country, so that we will not be kept waiting on the doorstep like poor relatives, as we were in the case of the International Monetary Fund. This is the first thing. The second is that we have to be firm and uphold our dignity in our interrelations with partners. We must always remember something: However strong European unity may seem today, and however unanimous the world community's wish for world peace might be, each individual state will need its own security.

Incidentally, a recent sociological survey revealed the average Russian's opinion of Russia's historical mission. Fully 69 percent of the respondents answered yes to this question: "Do you agree that Russia should remain a great power, even if this hurts its relations with the outside world?" (MOSKOVSKIYE NOVOSTI, No 30, 26 July 1992).

Deliberately ruining our relations with the outside world would be wrong, but the affirmation of Russia's status as a great power should be our constant concern. Otherwise, we might reconcile ourselves to the idea that we will never emerge from the present crisis and we will always feel inferior to others.

But let us return to our topic. On the level of military doctrine, it is important to find the correct definition for the "new architecture of security"—in other words, the possible nature of future unaverted wars, in accordance with which military organizational development is generally conducted. I agree that world wars, nuclear or conventional, are obsolete because they exclude the possibility of victory and are therefore absolutely unprofitable. The huge multimillion-strong armies are also a thing of the past. Although the nuclear powers retained their huge armed forces for almost half a century after World War II, this was frequently not a case of preparedness for nuclear war, but an attempt to

maintain the balance of power, to satisfy imperial ambitions, and sometimes even to perform police functions in foreign countries.

The most probable of all the different varieties of local wars and military conflicts today are the so-called "non-contact wars," like the war in the Persian Gulf, and low-intensity regional conflicts. The first type of war is, in my opinion, a new technological phenomenon, in which the latest models of highly accurate, "smart" weapons are used in all spheres of military operations—on land, in the air, on the seas, and in the space between the spheres. These include the guided missiles, bombs, and artillery shells of the air Force, air defense and missile defense forces, naval cruise missiles, electronic warfare systems, and night vision and guidance equipment. The weapons used today are most likely to be systems based on a combination of reconnaissance (or tracking), guidance, and result verification equipment. This kind of war can be fought without the classic type of front and without any contact between large forces on the ground, with limited human resources, but without excluding the possibility of civilian casualties.

The second type—the low-intensity conflicts—can take the form, as the experience of recent years has shown, of a confrontation between opposing sides with limited military potential, unless a developed power becomes involved in the conflict.

The danger of the exacerbation and escalation of this kind of conflict must be eliminated by political means for the sake of world security and stability, to the point of intervention by peaceful forces, and the Russian army must always be prepared to take part in these operations.

If this prediction of the future types of unaverted wars is correct, the structure of the Russian armed forces should include three basic military components: strategic nuclear deterrence forces, a corps of technical engineers (the forces and equipment of the air force, air defense forces, and the navy, electronic warfare systems and the equipment for their command and control), and an operational-strategic corps for rapid deployment and mobile operations, consisting of airborne assault troops and marines with their own means of transport by air and by sea.

We have to admit that this description of the nature of future unaverted wars and the organization of the Russian armed forces to meet these special demands have not always met with complete approval in hearings in parliamentary commissions and on the highest professional military levels. In some cases the reason is a lack of self-confidence, and in others it is the force of inertia and the conservative nature of military thinking. I will not try to choose the prevailing factor, but I will cite an example from a field closer to my own recent experience as an academy professor.

I think our system for the training of the highest ranks of military personnel, especially the top brass, is a definite hindrance in the comprehension of the current changes

in the sphere of military science. We have to seriously wonder whether it is worthwhile to continue to teach these personnel to draw the "nests" of enemy troops and the arrows of full-scale tank assaults on maps instead of learning to wage technological warfare with efficient computerized equipment.

The second problem, which is indissolubly connected to the first, is the problem of security and strategic stability on the national and international levels. In essence, the ability to balance combat readiness with security, the ability to prevent wars, but also to fight them when necessary, constitute a skill our officers and generals must master. Finding the right combination of efforts in order to prevent a war, or to stop one in extreme cases, is the most difficult job today, because no state has the special weapons and secrets guaranteeing the prevention of war, just as no one knows how many weapons a country needs for effective defense.

All of this proves how easy it is to make mistakes in determining the military organizational guidelines of a state and points up the serious implications of mistakes in an area in which Engels warned that a mistake of a single centimeter on a map of strategic operations turns into tens of thousands of square kilometers of lost territory and the lost lives of millions of soldiers on the battlefield.

It is a common belief that mistakes are usually the result of the limited knowledge of leaders and their inability to comprehend ongoing events and look into the future. This does happen, of course, but Professor A.A. Svechin, the well-known Russian military theorist who has devoted many pages in his works to the topic of strategic planning and forecasting, once made the paradoxical observation that "colossal damage to the military machine is sometimes caused not by insignificant or ignorant individuals, but by outstanding leaders who have regrettably taken the wrong road."

This is a paradoxical statement, but we know that genius is "no stranger to paradoxes."

Call for Retention of Principles of 'Sufficiency', Unacceptable Damage

*92UM1434A Moscow ROSSIYSKAYA GAZETA
in Russian 1 Sep 92 p 1*

[Article by Ermet Chernyy: "From the Past to the Future"]

[Text] Nine months have passed since Russia gained the status of an independent state. Whereas even school children knew who our potential adversaries were before, now many politicians do not even know this. However, such ideas are important for any country. It is on their basis that politicians must formulate military doctrine. You would agree, there is a significant difference if our potential adversaries are the Kingdom of Tonga, South Africa, the United States, or Poland. The

armed forces and technical hardware needed will be different... Defense costs will also be different.

Over the course of several decades, particularly in the postwar years, from 20 to 30 percent of our country's gross national product (GNP) went to building a war machine that the CPSU considered appropriate for our global missions.

Yes, we were strong. Parity with the United States was ensured, but in doing so the United States spent only six percent of its GNP on defense. Such spending varies from one to six percent in other developed countries. These many years of backbreaking military spending also destroyed our economy.

The task set should have been different: to create a defense system with certain forward set parameters corresponding to a specific military doctrine with limited financial and material resources.

In my view, the principle of defense sufficiency and a guarantee of inflicting unacceptable damage on an aggressor should be the goal in formulating a new military doctrine.

It is very important that the military doctrine be formulated as a political concept by civilian structures and be generally known. In doing so, the vicious circle that exists even now of linking policy, industry, and military strength—the military industrial complex—must be broken. The country needs general-purpose industry, not just "purely" military industry. Civilian industry should fulfill military (governmental) orders, considering this a great honor, since payment for these orders is a prize catch for which one must struggle.

It is not today's complex enterprise-conglomerates that should fight for them, but plants that have been broken down into smaller specialized functional design bureaus.

Military orders, particularly in aviation, the Navy, missile building, and even conventional arms, should be switched to a competitive basis immediately. To do this, it is necessary to reject secrecy in the first phase of competition. Then foreign firms could also participate in the competition. Competition is necessary both at the design level and at the level of product production. Orders should be given to those who offer the best designs, the highest manufacturing quality, and the lowest price.

Russia had all of this. Before 1917. Open competitions were held for designs and construction of battleships, destroyers, submarines, artillery systems, and so forth. The state, as a picky customer, chose all the best and in doing cared quite a bit about the ruble from the state treasury. In order to avoid collusion between suppliers, pre-revolutionary Russia had a law on "Plots in Bids in Shipments to the Treasury." Price collusion in such cases was punishable by 10 years of hard labor.

The task to preserve the high potential of scientists and designers able to further progress is just as timely as the

filtering of low-level specialists from this sphere. The hope is only on the attention of the state and on competition. Today, there is no answer to the question: Is it good that Korolev has a monopoly on the missile program, Kurchatov on the atomic program, and so forth? You see, even the semi-competition of aircraft builders (MiG-Su, for example) has clearly benefited aviation.

Finally, the regular military are the basis of defense. A high level of material support and social protection, together with the honored social status of professional military men, must be combined with complete depolitization of the army: there should be no parties, trade unions (but there already is), and other such structures. Servicemen, in exchange for quite specific and substantial benefits, must lose some of their civil rights. It is not business when generals give political speeches. In many countries, such generals would lose their shoulder boards the next day.

I do not think servicemen should have the right to vote or be elected. These rights should be restored only after leaving the army. These are the realities of political life. A large military unit in a specific region can clearly influence the course of an election campaign. The political system is obligated to preclude such a possibility. You will agree that the USSR Congress of People's Deputies looked ridiculous when nearly half of those in the hall were generals and colonels.

SECURITY SERVICES

Ukraine: Border Troops Training Chief on Military Education

92UM1357A Kiev NARODNAYA ARMIYA in Russian
24 Jul 92 p 1

[Interview with State Committee for Ukrainian State Border Defense Matters Deputy Chairman—Ukrainian Border Troops Commander and Combat Training and Military Education Directorate Chief Major-General Aleksandr Sergeyevich Artemov by Ukrainian Border Troops Press Service Officer Senior Lieutenant Sergey Astakhov: "How Do They Teach the Man with A Rifle?"]

[Text] Patriots are not born, but they become patriots. It is namely as soldiers, frequently in difficult and extreme conditions, that yesterday's young boys are imbued with lore for the Fatherland and with responsibility for its fate. In this regard, the question of what and how to teach our young men who are entrusted with guarding our peaceful labor assumes priority.

This was discussed in an interview with Major-General Aleksandr Artemov, deputy chairman of the State Committee for Ukrainian State Border Defense Matters, commander of the Ukrainian Border Troops, and chief of the Combat Training and Military Education Directorate.

My Interlocutor's Calling Card

Major-General Aleksandr Sergeyevich Artemov was born in the village of Rozhdestvenik of Zaporozhye Oblast. After completing middle school, he worked at a plant. Then he was drafted into the Border Troops and entered Moscow Border Troops School. He has served for more than 30 years in various officer positions in the Central Asian and Western border districts and he participated in the Afghan Campaign. He was elected a deputy of the Chernovtsy and Lvov gorsoviets [city councils] and also a member of the Turkmeniya Supreme Soviet Presidium. He completed the Armed Forces General Staff Academy by taking the final examinations without attending classes. He is a candidate of historical sciences. He has been decorated with the orders of the Red Banner "For Service to the Homeland in the USSR Armed Forces" 2nd and 3rd classes and with the Ukrainian Supreme Soviet Presidium Certificate of Merit.

[Astakhov] Radical changes of both domestic and foreign policy have occurred during the last year in Ukraine. What principles have been laid at the foundation of educational work in the Border Troops? In the process, what role is being allotted to the traditions of the Ukrainian people?

[Artemov] Success in carrying out the tasks facing the Ukrainian Border Troops depend to a significant degree on the moral-psychological training and combat training of personnel. In accordance with the concept that has been developed, educational work in the troops is one of the main methods for ensuring vigilant and reliable defense of Ukraine's state border and economic zone.

The creation of a flexible system of education that responds to life's demands and objective processes is certainly no simple matter. Reform of the troop structures in accordance with the specific duty-combat activities of the troops and the formation of a new border policy in the states bordering Ukraine, the worsening crime situation in the border areas and many other factors are leaving their mark on that. The creation of an effective system of military, moral, ethical, legal and cultural education of servicemen is unthinkable without taking them into account.

We must also consider that today our people are filled with a spirit of national-cultural revival and are full of desire to learn the history of the Homeland. Ukraine's past, through which the aspiration to declare its independence passes, is an enormous, previously unused, reserve for the education of the people. Priority direction in the educational work of the Border Troops has been given to the formation of loyalty to constitutional duty and to the military oath to the Ukrainian people, patriotism, high moral-combat and psychological qualities based on universal values and ideals.

In the past, the Ukrainian Cossacks said about themselves: "Defenders of the faith, brotherhood of knights, and fighters for the people's welfare". And these words did not diverge from their deeds to defend their lands.

We are striving so that the efforts of educational work are successfully refracted in the specific deeds of the current defenders of the borders of Ukraine—the primary task of the educational structures that have been created in the troops.

[Astakhov] What new things are being introduced into the process of border troop training?

[Artemov] The process of studying the history of our state, its borders, the formation and the activities of the Armed Forces at the current stage was activated after the Ukrainian Supreme Council adopted the laws "On the State Border of Ukraine" and "On the Border Troops of Ukraine". Work began first of all in the system of humanitarian and legal training—with primary emphasis on general political issues. Unfortunately, for the time being books such as O. Subtelnyy's "Istoriya Ukrainy" [History of Ukraine] and the collection of Laws of Ukraine on Military Issues have been acquired in limited numbers and distributed to the units. Associates of the Institute of Ukrainian History are rendering a great deal of assistance to us in training personnel. They are first of all Deputy Director V. Smoliy and Section Head, Doctor of Historical Sciences M. Dmitriyenko, who personally delivered a series of lectures on the history of our Homeland and on the traditions of Ukrainian troops to the Ukrainian State Committee for the Border officers. Institute teachers are developing teaching aids with broad coverage of these themes.

We understand that the training process in the troops still needs to be improved. That is also associated with an increase of the strength of the Ukrainian Border Troops that has occurred at the expense of servicemen of other branches of the Armed Forces. We have to prepare them to conscientiously and professionally carry out the tasks of defending the border.

[Astakhov] For decades, besides officers, Komsomol and Party organizations were involved with educational work in military subunits. Right now, these structures don't exist in the troops and at the same time the problems of young people were and remain...

[Artemov] Actually, Party organizations and Komsomol structures have ceased their activities in the troops, as in the country's Armed Forces on the whole. The distinctive features of our subunits are such that the overwhelming majority of servicemen are young people under 30 years of age. They have their own tastes and life values and we must take them into account. Therefore, the Regulation on The Ukrainian Border Troops Youth Union [SMPV] has been sent to units right now and the creation of its organization has begun. SMPV's primary task consists of social protection of young border troops, cultural-educational work, and the organization of the troops' leisure time. I think that if we structure the youth policy based on complete trust, the support of socially significant initiatives and the creation of conditions for the manifestation of independent social initiative, then

with a skillful approach we will be able to attain good results in the protection of the border.

We are also continuing to maintain close contacts with the young people's social organizations that exist in Ukraine and we are rendering assistance in the work of military-patriotic clubs and associations.

[Astakhov] And what is the situation of soldiers in the Ukrainian Border Troops who are believers? And, in general, how are atheists and believers in the same collective getting along?

[Artemov] At the present time, servicemen of various nationalities with both atheistic and religious convictions are serving in the troops. During the time that has passed since the formation of the Ukrainian State, the Supreme Soviet has adopted a number of laws that provide legal protection of citizens of Ukraine who are performing military service. So, border troops have the right to profess any religion, to observe any beliefs, and to openly express and freely propagate their religious or atheistic convictions in accordance with Article 6 of the Law of Ukraine "On Social and Legal Protection of Servicemen and Their Family Members". Incidentally, that aspect also found its reflection in the concept of defense of the state border of Ukraine.

Although I need to point out that the number of believers who are serving in our troops is insignificant. At the same time, many soldiers, officers, and warrant officers have begun to be more interested in the subjects of a religious cult and to read the corresponding literature. While considering this, our educational structures are closely cooperating with clergymen and invite them to meetings with personnel.

We have begun to take religious holidays into account when planning official military activities. So, during the course of the Easter Holidays, those compulsory service military personnel who wanted to were granted the right to attend church services. Manning of daily details and planning their duties were conducted while considering soldiers' religious convictions.

As you can see, the leadership of the state committee for the border and the command authorities of units and subunits are doing everything possible for the qualitative training of young soldiers for conscientious performance of duty. And we are receiving comprehensive assistance from the government of Ukraine, local authorities and border residents in this matter. Thanks to them for all of this!

OMON Personnel Levels, Salaries Noted
924C2192B Moscow ARGUMENTY I FAKTY
in Russian No 31, Aug 92 p 8

[Letter to the editor]

[Text] *One frequently sees on television how the OMON [special purpose militia detachment] operates. I am interested in knowing how much an OMON employee gets for his work and what the total strength of OMON is in Russia. [Signed] A. Grishin, Riga.*

This is what the Russian Federation MVD [Ministry of Internal Affairs] public relations center told us in reply to this question: At the present time in Russia, there are 20 detachments of special purpose militia deployed in the republic, kray, and oblast centers with the most crime-conducive conditions. A total of 5,500 persons serve in the OMON today. The wage of an OMON employee is R4,500-5,000 per month. In addition, each employee is insured in the event of injury to his health or of his death for the sum of R250,000.

Six more OMON detachments will be created in the near future in the cities of Stavropol, Pskov, Saratov, Kaliningrad, Smolensk, and Omsk at the request of the heads of administrations.

Turkmenistan Forms Border Troops

92UM1428A Ashgabat TURKMENSKAYA ISKRA
in Russian 12 Aug 92 p 1

[Turkmenistan Presidential Decree signed by Turkmenistan President S. Niyazov, 11 Aug 92, Ashgabat: "Turkmenistan Presidential Decree 'On the Formation of the Turkmenistan Border Troops'"]

[Text] To ensure the protection of Turkmenistan's State Border and the maritime economic zone and to create a single system of state security:

1. Form the Turkmenistan Border Troops based on the Central Asian Border District Border Troops and the division-sized and smaller units subordinate to it that are deployed on the territory of Turkmenistan.
2. The Government, jointly with the Turkmenistan National Security Committee, as a result of the issuance of this Decree, will prepare a draft Provision on the Turkmenistan Border Troops within one month.

[signed] S. Niyazov
President of Turkmenistan
Ashgabat
11 August 1992

Border Troops Commander Designated in Turkmenistan

92UM1428B Ashgabat TURKMENSKAYA ISKRA
in Russian 12 Aug 92 p 1

[Turkmenistan Presidential Decree signed by Turkmenistan President S. Niyazov, 11 Aug 92, Ashgabat: "Turkmenistan Presidential Decree 'On the Appointment of A. Kabulov as Turkmenistan Border Troops Chief of Staff'"]

[Text] Appoint Comrade Akmurad Kabulov Turkmenistan Border Troops Chief of Staff, having relieved him of his duties as First Deputy Chairman of the Turkmenistan KNB [National Security Committee].

[signed] S. Niyazov
President of Turkmenistan
Ashgabat
11 August 1992

Akmurad Nazarovich Kabulov

Akmurad Nazarovich Kabulov was born in 1942 in the village of "Bolshevik" of Moskovskiy Rayon of Chardzhou Oblast. He is Turkmen. He has a higher education. His work activity began in 1963 at Deynau Agricultural Administration after graduation from Turkmen Agricultural Institute of Animal Husbandry. Then, from 1968 through 1970, he studied at the USSR KGB Higher School. After graduation from it, he worked in various posts in the Turkmenistan organs of state security. From 1990 through 1992, he was chief of the Chardzhou KNB Administration and in 1992 he was appointed first deputy chairman of the Turkmenistan Committee for State Security. He speaks French and Turkish.

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