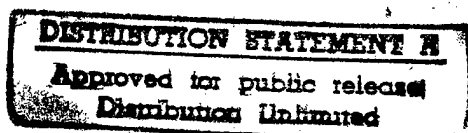




JPRS Report

Soviet Union

Military Affairs



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Soviet Union

Military Affairs

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10 September 1991

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Gorbachev Thanks Army Lieutenant

LD3008230791 Moscow Radio Moscow World Service
in English 2300 GMT 28 Aug 91

[Text] President Gorbachev has extended through the MOSCOW NEWS gratitude to Senior Lieutenant Igor (?Skorodumov) of the general headquarters. The Army officer kept intact the office correspondence and coded messages that came in and out from 19 through 21 August during the abortive coup.

(?Skorodumov) was instructed to burn the letters and coded messages in the morning of August 22d. The lieutenant reported that through a number of persons to the MOSCOW NEWS and the paper monitored this information to the office of Mikhail Gorbachev who adopted appropriate measures.

One cable, signed by General Varennikov, who was one of the putschists, shows how important the documents are. It read: Delay would be fatal, after all we've agreed to take Yeltsin first of all.

Volkogonov Views Post-Coup Outlook

91UM0843B Moscow ARGUMENTY I FAKTY
in Russian No 34, Aug 91 p 2

[Interview with D. Volkogonov, adviser to Boris Yeltsin, by unidentified ARGUMENTY I FAKTY correspondent in Oxford on 24 August: "D. Volkogonov: 'There Has Been a Change of Eras'"]

[Text] For some reason or other the well-known scholar D. Volkogonov, an adviser to Boris Yeltsin, did not appear on the political horizon at the most decisive moments. We learned with great difficulty where he is now.

[Volkogonov] Yes, it has been a dramatic August for me. A large tumor was discovered. Remembering my lectures in Oxford, it was proposed that I have the operation there, in the clinic. All went well, apparently, but during the operation, alas, a new tumor was discovered. In other words, I greeted news of the putschists' attempted coup d'etat in the recovery ward....

[ARGUMENTY I FAKTY] How do you, a philosopher and historian, evaluate what is happening?

[Volkogonov] The country is at a crossroads: either transition to a civilized society by way of reforms or running repairs and a return to totalitarianism. The state and party upper stratum opted for the second. I believe that the idea of a coup had long been in the minds of these people. At a meeting of important military officers I once heard the words, spoken half in jest, it is true: "There will be order in the country if power is transferred to the district commanders." And recent candidate Makashov hinted very transparently at the need for the military to come to power. But the putschists failed to take account of the fact that the majority of junior and

middle-ranking command personnel had long been politically on the side of the democratic forces.

[ARGUMENTY I FAKTY] But could the coup have been successful?

[Volkogonov] No, it could not, evidently. Primarily because the people have six years' potential behind them. First, the conspirators did not have anyone who was in the least way a leader (although, in my opinion, Lukyanov had long been backstage, carefully directing the preparations), but the democratic forces had such a leader, and he is a leader of historic stature: Boris Yeltsin.

[ARGUMENTY I FAKTY] What is the main result of the dramatic confrontation of the two forces?

[Volkogonov] The totalitarian system has collapsed. Now and forever. Addressing the 28th party congress, I said last year: "The party can survive only under the conditions of its complete renunciation of the communist utopia and a break with the criminal past. Otherwise the fate of the East European parties awaits the CPSU."

[ARGUMENTY I FAKTY] What was your first reaction to the events in the homeland?

[Volkogonov] I had difficulty contacting Moscow from the ward. But I ultimately sent the Russian parliament a telegram of the utmost support. I sent a fax to Boris Yeltsin profoundly regretting that I could be of no assistance to him at this time. But I conveyed some advice in respect of the Army. I gave British newspapers and radio several interviews....

[ARGUMENTY I FAKTY] What now?

[Volkogonov] Each person sooner or later faces the situation where he has to cross the fine invisible line separating being from nonbeing, as no one may return from behind this line. I do not know how long fate will allow me to watch the sun rise. I will return to the motherland at the start of September and will joyfully get back to day-to-day concerns.... Within a few days there has been a change of eras.

Marshal Akhromeyev's Grave Desecrated

LD0209191291 Moscow Russian Television Network
in Russian 1700 GMT 2 Sep 91

[From the "Vesti" newscast]

[Text]

[Correspondent] We know that one should speak well of the dead or say nothing about them. This rule has been ignored by all in our country for a long time, and the dead come in for even worse than the living. But words are words. There are, regrettably, avengers of the people who don't give any peace to the very graves of the dead. [video report, shows cemetery, fresh dug earth near a grave]

According to information which Vesti received from competent sources, at the Troyekurovskoye Cemetery this morning it was found that wreathes were missing and there were signs of opening of the grave of Marshal Akhromeyev and another serviceman. The cemetery quickly declared itself closed for cleaning; access for visitors was restricted; and security was stepped up.

What did you see of the damage?

[Unidentified man on bench] Akhromeyev's grave had been violated.

[Correspondent] What could the purpose be?

[Man] The purpose is not known. Perhaps there had been some attacks on somebody's part.

[Correspondent] What is it, political revenge, or hooliganism—in a word, vandalism? The procuracy of the capital's Gagarin Rayon has opened a criminal investigation on the desecration of the grave.

Arkhangelsk Official Says Army Chiefs Met Before Coup

PM3008145491 Moscow KOMSOMOLSKAYA PRAVDA in Russian 30 Aug 91 p 1

[V. Karkavtsev report: "Why the Generals Assembled a Month Before the Putsch"]

[Text] Arkhangelsk—The oblast soviet session in Arkhangelsk went on for two days, during which the deputies carried out a "debriefing"—they ascertained how the local administration had conducted itself in the days of the coup d'etat. Aleksandr Ivanov, chairman of Arkhangelsk City Soviet, unexpectedly spoiled the agreeable picture that was being painted at the session.

He informed the meeting that in July, approximately a month before the putsch, senior military officers and civilian officials assembled in Novaya Zemlya and among other problems discussed actions in a state of emergency regime. During those days the nuclear archipelago was visited by Baklanov, Moiseyev, Chernavin, the writer Prokhanov, and also Gromoglasov, first secretary of Arkhangelsk RSFSR Communist Party Oblast Committee, and Shiryayev, deputy chairman of the oblast soviet. Referring to information received in a private conversation with one of the meeting participants, Ivanov stated that there, in Novaya Zemlya, there was energetic lobbying of General Moiseyev—his colleagues wanted to see him as an active figure in the future putsch.

Committee for 'Internationalist Soldiers' Set Up

LD0109094391 Moscow TASS International Service in Russian 1724 GMT 30 Aug 91

[Text] Moscow, 30 August (TASS)—Under a decree of the USSR president, a committee for the affairs of internationalist soldiers, attached to the President of the

Soviet Union, was set up today. The document points out that this decision has been taken as a mark of appreciation for the services of USSR citizens who performed their internationalist duty and participants in military conflicts outside the USSR, and also out of consideration for the need to coordinate the actions of state bodies and public organizations in tackling the social, medical, and legal problems of internationalist soldiers and members of their families.

Ruslan Aushev has been appointed the committee's chairman. He has been instructed to present proposals about the make-up of the committee, and its tasks, rights, duties and operating procedures.

Polls Indicate Support for Armed Forces

PM0409091791 Moscow ROSSIYSKAYA GAZETA in Russian 3 Sep 91 p 1

[Report by Vladimir Kuznechevskiy: "Army: With the Reaction or With the People?"]

[Text] Since the fall of last year the idea of a state coup has been in the air. And all this time the democratic press has been asking with whom the army would be in the event of a coup—with the reaction or with the people.

In March 1991 we drew our readers' attention to the fact that to judge by the February public opinion poll in the RSFSR [Russian Soviet Federated Socialist Republic] the republic's population expresses great trust in the armed forces (see ROSSIYSKAYA GAZETA No. 51). Let us recall the results of that study.

Question: Which of the organizations and institutions of our society listed below do you trust?

Answer: 63 percent—the armed forces

57 percent—the church

55 percent—the RSFSR Supreme Soviet chairman

51 percent—the Congress of RSFSR People's Deputies

51 percent—the RSFSR Supreme Soviet

36 percent—the USSR Supreme Soviet

35 percent—the USSR president.

And now nearly six months have elapsed and the state coup has come and gone. And during it it was reaffirmed once again that the old Russian saying is right: The voice of the people is the voice of god. A 25-27 August telephone poll commissioned by the U.S. newspaper USA TODAY in Moscow and Leningrad showed confirmation of the ratings of all the above-mentioned structures only with an even greater reduction of these ratings for the union power structures. The army has not betrayed the people's expectations and the people have assessed at its worth the Armed Forces' contribution to the suppression of the putsch.

A negligible minority, only two percent of those polled, are inclined to put the blame for the putsch on the army. Some 31 percent of the population of the Russian capitals believe that the army has once more shown that it is part of the people and will not act against them and to the question, do you believe that the army subunits' refusal to obey orders during the putsch attests to the complete demoralization of the army only three percent answered in the affirmative. The overwhelming majority of those polled treated the Armed Forces with trust.

Former Baltic Commander Denounced for Behavior in Coup

*OW0409215091 Moscow BALTFAX in English
1900 GMT 4 Sep 91*

[Following item transmitted via KYODO]

[Text] The newly appointed Commander-in-Chief of the Air Force of the USSR Colonel-General Petr Deinekin (who replaced Mr Yevgeniy Shaposhnikov who had become Soviet Defense Minister) denounced the behavior of the former commander of the Baltic Military District, Mr Fyodor Kuzmin, during the attempted coup d'etat in the Soviet Union. Speaking at a press-conference at the air force base in Kubinka near Moscow on Wednesday, Mr Deinekin was emphatic that "the mission of the armed forces is not to force people to change the way they think at gunpoint".

Tbilisi Investigation: Characteristics of AK-47 Bullet

*91UM0806A Moscow KURANTY in Russian No 130,
12 Jul 91 p 5*

[Article by Captain 2nd Rank (Res) Gennadiy Melkov, doctor of law, professor, under the rubric "Politics": "Against One's Own People"]

[Text] Major General V. Skorokhodov, deputy chief of the Main Missile and Artillery Directorate of the USSR Ministry of Defense, declared categorically: "The Soviet Army has no 5.45 mm bullets with special features. These are the conjectures of disgraceful specialists who would cast suspicions upon the army." However, the facts irrefutably demonstrate that our army has gyrating, fragmenting bullets and they are being used.

Highly placed legal experts from the Main Military Procuracy and the USSR Procuracy declined to answer questions on the features of bullets for the AK-47 assault rifle, whereas prosecutors of lower rank who were members of the presidential commission for verifying the objectivity and thoroughness of the investigation into the causes of deaths and injuries of servicemen were able to confirm instances of the use of this terrible weapon on the basis of official documents.

A report by the Azerbaijani Scientific Research Institute on the findings of a study of the effects of declaring a state of emergency on the night of 19 January last year

states that 206 cases of the use of 5.45 mm MZhV-13 bullets (sharp-pointed, jacketed, tombac-clad, with a steel core and a lead sleeve). These bullets, the report states, have a displaced center of gravity, which enables them to alter their line of flight upon striking an obstacle. The bullets have unstable flight ballistics. When moving through human tissue or some other obstacle this causes the bullet to "gyrate," while retaining enormous kinetic energy. Unlike the 7.62 mm bullet designed for firing from the AK-47, its jacket separates from the core and explodes at initial contact with an obstacle or a human body, which greatly increases its destructive force.

How does all of this fit in with military specialist Skorokhodov's assertion that the 5.45 mm bullet has no "special features"? Or is the Azerbaijani institute, as an "interested party," deceiving the people?

Now let us look at documents compiled by military medical experts and criminologists on the basis of which the military prosecutors and investigators have conducted the investigation. We have selected the most revealing of the many documents reviewed by the presidential commission.

In Criminal Case No. 5 charging Pvt Guzhva with killing Pvt Dmitriy Chumichev the expert forensic medical and criminal report of 27 April 1989, signed by the chief of the 87th Forensic Medicine Laboratory, Privko, and his deputy, contains the following entry:

"Question: Does the bullet have a displaced center or not?

"Answer: The spent 5.45 mm round submitted for study is part of a standard-issue cartridge designed to be fired from the 1974-model Kalashnikov assault rifle or light machine gun. The bullet is designed with the center of gravity shifted somewhat toward the rear. This increases the angle of rotation of the point...." But that is not all. The bullet also has other design features. Its jacket can break up into fragments, each of which can move in a separate direction, increasing the area of destruction and making death inevitable, no matter where the bullet strikes the body. This is precisely what General Skorokhodov is attempting to conceal.

Let us look at another criminal case, the one against Private K. Masagetov, who shot and killed Sergeant Yu. Kroman and Private P. Andryushchenko: "Numerous bullet wounds to Kroman's body were caused by fragments produced by the bullet's disintegration after passing through a solid obstacle or upon encountering such (the obstacles were Kroman's bones—G.M.), a fact indicated by the shape and dimensions of the wounds and by the presence of fragments of bullet jackets deep inside the individual wounds." We can see that the finding of the military experts coincides to an amazing degree with that of the Azerbaijani institute.

The testimony of Lieutenant General (retired) K. Lisitsin, corresponding member of the USSR Academy of Medical Sciences, professor and former chief surgeon

of the USSR (1976-1989), who performed many operations in Afghanistan, totally destroyed Skorokhodov's deception: "The lightweight, short bullet is unstable in flight, turns and tumbles more easily in the body. As a result the exit hole is several times larger than the entry. The bullet channel resembles a crater.... The powerful shock wave increases the area of dead tissue dozens of times over. An experienced surgeon knows how much has to be cut away in the case of such wounds. Imagine what happens when the bullet encounters a bone. The fragments increase the lesion. Even if the wound appears to be a "clean" one and the bullet has entered point-first, with little difference in size between the entry hole and the exit, vessels, nerves and muscles are destroyed far from the wound channel. If the bullet passes near a bone, the bone can break; if it passes next to the heart, it can cause a myocardial infarction."

O. Gelityuk, V. Gotka and V. Mitsul were killed in Dubossary by precisely such bullets. Similar documentary evidence comes from Vilnius, where bullet fragments were removed from the bodies of V. Vaytkus, R. Yuknyavichyus and KGB Lieutenant V. Shatskikh.

On 20 May there was a radio report from Khabarovsk on the death of a boy who had broken into a military depot. The bullet struck a buttock, but... the boy died. Those same 5.5 mm fragments tore up all of the child's internal organs.

Now a few words about the international aspect of the use of bullets with a displaced center of gravity. International law now precisely defines and establishes the following criteria for evaluating means and methods of waging war (even against an enemy, not to speak of one's own population):

- warring parties may not use weapons which increase the suffering of people (cause excessive suffering) or result in inevitable death (the Petersburg Declaration of 1868: page 23 of the Convention on Laws and Customs of Ground Warfare, 1907);
- warring parties may not use weapons which cause excessive injuries or have a selective effect (the 1980 Convention Banning or Limiting the Use of Specific Types of Conventional Weapons Which Are Considered to Inflict Excessive Injuries or Which Have a Selective Effect, and attendant protocols). (The USSR is a signatory to the convention.) These criteria apply to every use of weapons in any war or in an internal conflict. Violations of these criteria constitute a war crime as specified in the Charter of the International War Tribunal. The use of such bullets represents not only a failure by our nation to honor its international commitments but also a crime against its own people.

The final report by the presidential commission, discussed and approved at the All-Union Rally of the Parents of Servicemen on 23 March 1991, contains the following conclusion: "The 5.45 mm bullets with a displaced center of gravity, which have special design features, increase people's suffering many times over and

make death inevitable, must be totally banned, removed from the arsenal and destroyed. Such bullets are banned by current international law." The 5.45 mm bullets must be removed from the military arsenals of all armies and totally destroyed. And this needs to be accomplished at the negotiating table between the USSR and the USA and other interested states.

While the 7.62 mm bullet left a wounded person a chance to live; the wounded person could be saved and his life preserved (the Kharkov boy, Alesha, wounded in the buttock could also have been saved), the 5.45 mm leaves no chance of survival, no matter how General V. Skorokhodov tries to cloud the issue. There is only one outcome from a hit by a 5.45 mm bullet: inevitable death in the vast majority of cases.

Whoever issued the technical specifications for the development of such bullets long before 1974 and whoever tested them before placing them into mass production should have considered international law and its bans.

Veterans's Affair Committee Chairman Appointed

*91UM0830C Moscow SOVETSKAYA ROSSIYA
in Russian 1 Aug 91 First Edition p 2*

[Unattributed report: "Organization of USSR Internationalist Soldiers' Affair Committee]

[Text] In compliance with the 25 April 1991 USSR Presidential Ukase on Measures for Social Rehabilitation and Improvement of the Living Standard of Persons Performing Their Internationalist Duty in the Republic of Afghanistan, Their Dependents, and Other Participants of Local Conflicts Beyond the Borders of the USSR, the USSR Cabinet of Ministers has organized at the USSR Cabinet of Ministers the Internationalist Soldiers' Affairs Committee to coordinate the activity of state and public organizations related to standard of living improvement for persons who performed their internationalist duty beyond the borders of the USSR, devise a mechanism for implementing state and public programs to assist these citizens, and involve them in useful social, political, and economic activities.

Appointed chairman of the Internationalist Soldiers' Affairs Committee at the USSR Cabinet of Ministers was R. S. Aushev.

Decree on WWII Special Units Veterans' Benefits

*91UM0830B Moscow SOVETSKAYA ROSSIYA
in Russian 1 Aug 91 First Edition p 2*

[Unattributed report: "Benefits for Members of Special Units Active in 1941-1945]

[Text] The USSR Cabinet of Ministers has decreed the following:

1. To extend the benefits provided by law for participants of the Great War of the Fatherland to volunteers

serving in the army in the field; to workers in special units of the People's Commissariat of Railroads and People's Commissariat of Communications; crews of fishing and transport vessels and air crews of the People's Commissariat of the Fishing Industry of the USSR; air crews of the Main Administration of the Northern Sea Route who in the Great War of the Fatherland were placed into the status of persons included in the ranks of the Red Army carrying out missions in the interests of the Army and Navy within the rear boundaries of war fronts or zones of operations of naval fighting forces; and crews serving aboard ships of the transport fleet seized in ports of fascist Germany on 22 June 1941 in violation of the Convention on status of enemy merchant ships at the outbreak of hostilities (The Hague, 1907).

The USSR Ministry of Railroads, USSR Ministry of Communications, USSR Ministry of the River Fleet, USSR Ministry of the Fishing Industry, and agencies of union republics managing the river fleet, are to operate, in cooperation with the USSR Ministry of Defense, to compile a list of includable structural subunits with an indication of the time period the latter were located within the rear boundaries of war fronts or zones of operation of war fronts, and a list of vessels of the transport fleet.

The USSR Ministry of Finance is to work jointly with interested ministries and departments to determine fund sources, payment procedure to be employed, and amounts of reimbursement funds associated with benefits provision in compliance with this decree.

2. To stipulate that the persons mentioned in provision 1 of this decree are entitled to receive benefits upon presentation of proof of entitlement as required by the CPSU Central Committee and USSR Council of Ministers Decree No 220 of 27 February 1981.

The USSR Ministry of Labor and Social Problems is to work jointly with interested ministries and departments, the USSR Ministry of Defense, and the USSR Ministry of Justice to devise, in one month's time, a procedure for issuing entitlement certificates and publish a set of instructions regarding application of this decree.

3. The USSR Ministry of Information and the Press is to assure in 1991 the preparation of blank forms for certificates and coupons for travel tickets to be made available at 50-percent discount by request of agencies responsible for issuing these documents.

The USSR Ministry of Material Resources is to be allotted funds for the printing of abovementioned blanks and coupons.

No Chemical Weapons in Azeri Ammo Dump Explosion

91SV0039A Moscow KRASNAYA ZVEZDA in Russian
13 Aug 91 First Edition p 1

[Article by Colonel V. Kaushanskiy: "From Transcaucasus MD—Accident in Salogly"]

[Text] As was already reported, at 1415 hours 10 August, Moscow time, a fire occurred and explosions rang out at an ammunition storage base in the area of the Azerbaijan populated area of Salogly. Two soldiers were slightly wounded. There is damage at the railroad station and a nearby military housing area. There are no casualties among the civilian population and military personnel. Lieutenant General A. Skoryy, chief, Transcaucasus MD Military Political Directorate, comments on the situation as it is today:

"The cause of this accident was negligence and flagrant disregard of safety measures by Private I. Cherkasov. He unintentionally fired an antitank missile propelled grenade into an ammunition stack. Figuratively speaking, a chain reaction occurred. Grenades flew out to all sides and began to explode outside the base. Several centers of fires began. It was immediately decided to evacuate the people from the danger zone. The evacuated families were given shelter, food and basic necessities. At the present time the consequences of the fires are being eliminated, and roads and access ways are being restored. And, of course, in the shortest time possible everything will be done to assist the people to return home.

"In the mass media reports flashed about an explosion of chemical munitions in the area of Salogly. I can state with full responsibility that we are talking about conventionally armed grenades here."

'No Evil Intention' Behind Explosions at Azeri Shell Dump

AU2808080291 Tbilisi SVOBODNAYA GRUZIYA
in Russian 17 Aug 91 p 3

[Interview with Yuriy Grekov, first deputy commander of the troops of the Transcaucasian Military District, by unnamed SAKINFORM correspondent; place and date not given: "The Echo of the Explosions in Salogly"]

[Text] Tbilisi, Salogly—The explosions that resounded like thunder last Saturday at the artillery shell dump at the Salogly station in the Republic of Azerbaijan also disturbed the population in the Republic of Georgia. This is not surprising: The settlement is situated several dozen kilometers from Tbilisi. As usual in such emergency situations, the most diverse rumors were spread, including one that chemical and bacterial weapons were being stored at the dump.

These rumors were categorically denied by Yuriy Grekov, first deputy commander of the troops of the Transcaucasian Military District. In an interview given

to a SAKINFORM correspondent, he stated that no chemical, poisonous, or radioactive substances were being stored on the territory of the military supply depot in Salogly. Furthermore, official instructions categorically forbid the storage of different types of munitions in one place. According to the general, shells for the RPG-22 grenade launchers were being stored there.

[SAKINFORM] What was the cause of the explosions? Do you not exclude the possibility of sabotage?

[Grekov] The reason has been established. It is unambiguous: gross violation of security measures while handling munitions. The same opinion was also expressed by the members of the presently functioning competent commission of the Ministry of Defense under the leadership of Army General Anatoliy Betekhtin, first deputy commander of the country's Ground Forces. The culprit—a young soldier—has been exposed and has confessed to everything. In addition, there are witnesses. Therefore, there is no question of sabotage. I am deliberately not naming the guilty person as there was no evil intention behind his actions and, furthermore, the investigation has still not ended.

[SAKINFORM] Are there any victims?

[Grekov] There are none among the civilian population. There are two wounded among the military. One is slightly wounded and the other has a tunnel wound in his leg. It is not dangerous and, literally within a few days, the soldier will be discharged from hospital.

[SAKINFORM] How great is the material damage?

[Grekov] It amounts to approximately 10 million rubles. Both the civilian population and the military have been affected here. As a result of the explosions, two private houses were burned down in the settlement, several are in need of repair, and there has been some damage to furniture and domestic appliances. A certain amount of damage has been done to pastures, a highway, and a forest area and more substantial damage has been done to living quarters on the territory of the military installation.

[SAKINFORM] Is there a danger of fresh explosions?

[Grekov] If so, only from individual shells. We cannot exclude the possibility that not all of them have burned out. Perhaps we will decide to explode the remainder but this does not present any danger to the local population; there is no question of there being any detonations. It has to be said that the shells were brought to this dump in accordance with the Vienna agreement and were intended for reprocessing as scrap metal or destruction.

Nevertheless, all precautionary measures were taken.

Lieutenant General Aleksandr Skoriy, chairman of the joint commission, emphasized that the military view their main task as the most rapid elimination of the consequences of the accident and full compensation to the local population for losses incurred.

Armed Clashes Continue in Azerbaijan

LD3108040491 Moscow TASS International Service
in Russian 1013 GMT 30 Aug 91

[By TASS correspondents A. Guseynov and K. Kuliyeu]

[Text] Baku, 30 August (TASS)—Armed clashes continue in the Geranboyskiy rayon of the Azerbaijan Republic. The KGB of Azerbaijan reported that despite the actions of the forces of law and order of the Republic, the village of Shafag was again the object of massive shelling from grenade launchers and automatic weapons on the evening of 29 August.

This time, too, the bandit attack was repulsed by operative groups of the KGB and Ministry of Internal Affairs of Azerbaijan. One inhabitant of the village was killed and three members of the republic's state security were injured. The village was shelled again this morning.

According to information from the Ministry of Internal Affairs of Azerbaijan, a vehicle with seven passengers of Azeri nationality was seized near the village of Ashagy-Veysalli in Fizulinskiy rayon and driven in the direction of the town of Martuni. An hour later one of them was set free, but he carried a demand from the kidnappers to the authorities to exchange the remaining hostages for two persons of Armenian nationality currently in prison in the town of Shusha.

Further on Estonian, USSR Army General Staff Discussions

OW0509122491 Moscow BALTFAX in English
1120 GMT 5 Sep 91

[Following item transmitted via KYODO]

[Text] Another round of talks between the Estonian governmental delegation led by Prime Minister Edgar Savisaar and representatives of the USSR Army General Staff led by Chief of the Staff General Vladimir Lobov took place in Moscow Wednesday evening. The two sides discussed the status of the Soviet Armed Forces in Estonia, the withdrawal of Soviet troops from that sovereign republic and the transfer of the civil defense force under Estonia's control. The talks will continue on Thursday.

Kazakh Representative on Military Implications of Union Treaty

91SV0039B Moscow KRASNAYA ZVEZDA in Russian
13 Aug 91 First Edition p 1

[Interview with Sultan Sartayev by Colonel A. Ladin:
"The Army Will Be One"]

[Text] On 20 August five republics—the RSFSR, Kazakhstan, Uzbekistan, Belorussia and Tajikistan—will sign the Union Treaty.

Are there changes in the treaty text compared to the published draft? How will defense matters be decided by the republics? Kazakh SSR delegation member Sultan Sartayev answers these and other questions.

[Ladin] Dear Sultan Sartayevich, won't the republic delegations again come to Moscow with packets of additional conditions and demands?

[Sartayev] The signing of the new Union Treaty by the first five sovereign states of the renewed federation is an exciting event which instills great hopes for further coordinated actions by all treaty participants to extricate the country from the prolonged crisis. We are setting off for Moscow to sign that text of the treaty that was finally agreed upon in Novo-Ogarev on 23 July. Along with the other authorized representatives of the sovereign republics, I have been able to work on the creation of this document from the very outset. Much work has been done. One could see how difficult the path was toward achieving agreement.

[Ladin] But, the Ukrainian parliament has still not expressed its attitude toward the final treaty variant, and discussion is set for September. Won't comments and additions again suddenly appear?

[Sartayev] It seems to me that this need not occur. As I already stated, the leaders of the sovereign states have met repeatedly, and the last time, in Novo-Ogarev on 23 July, the authorized representatives of the subjects of the new federation had the opportunity to defend the interests of their republics, and to seek solutions to problems that caused disagreements.

In my view it is now simply pointless to inject any material amendments. And it is necessary to understand that any new comment on a document that is open for signing creates unequal conditions for the parties.

But, if some amendments and proposals do appear (say, from the Ukraine), in my view they must be appended to the treaty text separately. We must sign the basic document.

[Ladin] No doubt questions of defense are difficult to solve apart from the union.

[Sartayev] I agree, they are difficult. As soon as separate republics desire to stand apart from the USSR, they, no doubt, will also have to think about the safety of their own borders. They will have to create their own armies. But to me, for example, this idea seems unrealistic. On the one hand, it is very costly for any republic individually to have modern military formations. On the other hand, even if such armies do appear, it is very hard to believe that they would effectively oppose possible aggressors. But in that case the expenditure of forces and resources is simply in vain. The question arises, for the sake of what?

Understandably, the USSR cannot remain the guarantor of the security of those republics that do not desire to conclude the Union Treaty. Of course, some sort of

supplemental agreements, mutual commitments, relating to jointly solving defense tasks are possible. But they can appear only as the result of the mutual desire of the parties.

[Ladin] Will the Union Government decide such matters taking into account the opinions of all subjects of the new Federation?

[Sartayev] Absolutely. And in general, with the signing of the new Union Treaty the state's military policy as a whole will be decided differently than before. In Article 6 of the Treaty, as is known, determination of the military policy of the Union; implementation of measures to organize and provide for defense; as well as establishment of a unified procedure for call-up and conduct of military service; deciding questions associated with troop activity and the stationing of military entities on the territory of the republics; organization of mobilization preparation of the economy; and management of defense complex enterprises, all of these things, are included in the sphere of joint authority of the Union and the republics. That is, the governmental authorities and managerial bodies of the Union and the republics are obligated to act jointly.

It seems to me that the republics must also have representation in the Defense Soviet.

[Ladin] Is it really true that even in emergency situations the USSR President may not make a decision without prior agreement with the presidents of the republics?

[Sartayev] As concerns situations that permit no delay, the head of the Union Government, of course, has the full authority to make decisions, conforming them to the situation. It cannot be otherwise. That is precisely why it is written in the draft treaty that the Union President is the Commander-in-Chief of the Armed Forces. And this explains everything. Moreover, Article 5 of the draft stipulates that the treaty participants allot to the Union such powers as providing for defense, and leadership of the Armed Forces.

[Ladin] In the discussion of the draft new Union Treaty in the country's parliament, Yu. Blokhin, a representative of the Soyuz group of deputies, stated that, in his opinion, today's text of the Union Treaty creates the basis for tomorrow's republic armies.

[Sartayev] I would like to emphasize that all formulations of the text of the new Union Treaty are utterly precise, and, it seems to me, do not allow for ambiguous interpretation. The document does not allow the possibility of individual subjects of the federation forming their own armies. Kazakhstan never advanced the idea of its own armed forces, and during the preparation of the treaty text was unequivocally against similar proposals by individual representatives of the republics.

I think that those republics that wish to join the treaty must fulfill strictly the condition concerning the armed

forces. And they must immediately dissolve any armed groups that exist today unlawfully on their territories.

[Ladin] What influence, in your opinion, will signing the new Union Treaty have on strengthening the Armed Forces of the Union?

[Sartayev] I think that this influence will be significant. Today numerous attacks on the army are tolerated. In part they are probably caused by the fact that the army is being drawn arbitrarily into solving inter-ethnic conflicts by military methods, while internal troops exist for this purpose. It is time to bring constitutional order to this question.

Frequently one also hears frankly absurd pacifistic utterances; statements such as that no one is planning to attack us. And where is the guarantee that no one really plans to attack? After all, powerful armies still exist in all of the mightiest countries in the world. It seems to me that, while these forces abroad exist, we cannot think about total unilateral disarmament. To the contrary, it is necessary for all subjects of the federation jointly to find the necessary means to maintain the Armed Forces, and their combat readiness, at a modern level. Otherwise, declarations about our freedom and democracy may turn out to be empty. I will underscore especially that the new Union Treaty, and the new approaches to the formation of military policy, must, it seems to me, accelerate and radicalize the military reform about which so much is being said.

No Officers To Serve in Latvian Parliament

*OW0309035991 Moscow BALTFAX in English
1000 GMT 2 Sep 91*

[Following item transmitted via KYODO]

[Text] The Latvian parliament has decided that the status of a People's Deputy in the republic is incompatible with army service.

In this context, officer MPs who were elected by civilians should submit by September 15 legally confirmed resignation applications to the USSR Defence Minister. If the officers do not resign, they will be stripped of their mandates.

Lithuanian Statistics on Damage Inflicted by Soviet Army

*LD3108184591 Moscow All-Union Radio Mayak
Network in Russian 2230 GMT 28 Aug 91*

[Text] Damages costing over 81 million rubles were inflicted in Lithuania as a result of the forcible actions of the Soviet Army in the Republic between January and June this year, announced the statistics department attached to the government of the Lithuanian Republic. Statistics also point that nearly 1.3 million rubles were spent on compensations and allowances to the people who were left without work because of the excesses of the

military. For the same reason, damages for nonproduced goods and uncompleted works have amounted to over 6.5 million rubles.

Military Experts Arrive in Lithuania

*LD0309220291 Vilnius Radio Vilnius Network
in Lithuanian 1800 GMT 3 Sep 91*

[Text] Independent military experts representing the Shchit [Shield] public organization have arrived in Lithuania. They are captain first rank in reserve, [word indistinct], and captain second rank in reserve, (Melkov). A certificate issued by the minister of defense, Marshal Shaposhnikov, states the purpose of their visit: to get acquainted with the situation in the military district after the events of 19-21 August and, together with the command of the military district, to prepare a report on this issue for the USSR minister of defense.

Ukrainian Deputies Interviewed on Status of Soviet Army

*AU0309065991 Prague LIDOVE NOVINY in Czech
29 Aug 91 p 3*

[Jaromir Stetina report: "What Will Happen to the Army?"]

[Text] On Saturday 24 August the Ukrainian Supreme Soviet declared the republic's independence. Virtually all the deputies, including the communists, voted for the establishment of an independent state. On the same day, Parliamentary Chairman Leonid Kravchuk signed a Decree on Military Units in the Ukraine confirming the Ukrainian Supreme Soviet's decision to assume control over all military units deployed in the republic. Thus, for the first time, one of the republics has attempted to break up the command and territorial integrity of the largest army in the world. In this connection, LIDOVE NOVINY asked Ukrainian deputies the following two questions:

[LIDOVE NOVINY] How do you explain the fact that representatives of the communist majority in the Ukrainian parliament became ardent supporters of Ukrainian independence?

[Deputy I. Saliy, a CPSU member] It is often the case that, at a time of danger, an individual suddenly perceives everything differently. All of us suddenly felt that we were no longer members of the party, but that we were the people's deputies.

[LIDOVE NOVINY] We were unable to reach Vyacheslav Chornovil, chairman of the Lvov Oblast Soviet, the opposition's likely candidate in the December presidential elections. However, his press spokesman, V. Kobzarenko, conveyed his position to us.

[V. Kobzarenko] The coup was staged by the CPSU Central Committee. The Ukrainian communists thought that by breaking away from the CPSU and by supporting Ukrainian independence, they could preserve the party's

structures in the republic and turn the country into a communist reservation. Despite this, they were forced into a corner and parliament adopted a decision to suspend their party's activity.

[LIDOVE NOVINY] Does the assumption of control over the three military districts by the Ukrainian Supreme Soviet mean that a Ukrainian Army is being formed?

[Kobzarenko] These troops do not form a Ukrainian Army. Most of their officers come from Russia and the other republics, and they will want to serve at home. The Ukraine must establish its own national guard and border forces.

[P. Osadchuk, an independent deputy for the Ivano-Frankov Oblast] To talk about the Ukraine's assumption of complete control over these military units is like declaring the Pacific Ocean to be the Kiev Sea. The important thing now is for the Supreme Soviet to make sure that it knows what the Union Army is doing on Ukrainian territory. The Ukraine does not need such a large military force. The status of the Soviet troops on Ukrainian territory should be approximately the same as the current status of Soviet troops in Germany.

Ukraine to Talk on Troop Transfers

*LD0109080791 Moscow Central Television First
Program Network in Russian 1200 GMT 31 Aug 91*

[from the "Television News Service" program]

[Text] By decision of the Ukrainian parliament, a special commission is to hold talks with the USSR Ministry of Defense on the mechanisms for transferring to the republic troops which are on its territory. The Ukrainian parliament has already made a decision on resubordinating these troops to republican authorities.

In this regard a very interesting—in my view—question arises. In the Soviet armed forces in the Ukraine there are not only Ukrainians but also conscripts from other republics. Just as Ukrainians serve in units scattered throughout the whole Soviet Union, so will there be some kind of exchange of servicemen so that Ukrainians serve in the republic's national forces?

General Staff, Ukrainian Leadership Agree on Army's Future

*PM0409151991 Moscow KRASNAYA ZVEZDA
in Russian 31 Aug 91 First Edition p 3*

[Colonel A. Polyakov report: "Consultative Meeting in Kiev"]

[Text] A consultative meeting has been held in Kiev between L. Kravchuk, chairman of the Ukrainian Supreme Soviet, and Army General V. Lobov, chief of the USSR Armed Forces General Staff. Ukrainian people's deputies, plus the commanders of the military districts located on the republic's territory and the Black

Sea Fleet, participated in it. The meeting participants exchanged opinions on the development of relations between the USSR Armed Forces and the Ukrainian Republic after its parliament adopted the decision to make all military units subordinate to the republic's Supreme Soviet.

After the talks Army General V. Lobov told your own correspondent that the meeting had gone off without the slightest hint of confrontation, although not all viewpoints coincided. The exchange of opinions will be regular; it is necessary to arrange closer coordination between the USSR Ministry of Defense and the new structures dealing with military questions in the Ukrainian government. The decision of the republic's parliament to make all military units subordinate to the Ukrainian Supreme Soviet should in no way affect the progress of the troops' combat training, the state of military discipline, or the maintenance of good organization and order.

The republic's leadership gave an assurance that its attention will be focused first and foremost on improving the servicemen's social protection and raising their status.

Ukraine's Kravchuk on Setting Up Internal Armed Forces

*LD0409213491 Moscow TASS International Service
in Russian 1750 GMT 4 Sep 91*

[By UKRINFORM-TASS correspondent Sergey Balykov]

[Text] Kiev, 4 Sep—"Our starting point is that sharp turnarounds in military policy are not called for today," stated Leonid Kravchuk, chairman of the Ukrainian Supreme Soviet, at a meeting today with journalists. The independent states within the USSR should preserve their economic and military-strategic links, but should give them a new content. The mechanisms for implementing them should also be different, he said.

The head of the Ukrainian parliament has divided problems connected with the armed forces into three

parts. First is the need for the Ukraine to have its own armed forces, the personnel and structure of which are to be defined by the republic. The second part concerns military-strategic forces which belong to a general center and which are directed from this center, because each republic is not in a position to have its own anti-aircraft defense, navy, missile forces, or nuclear weapons. Leonid Kravchuk noted that the Ukraine leadership is not to be in charge of those strategic armed forces situated on the territory of the republic, but will participate in working out strategy and military doctrine and will also be in possession of all necessary information.

The third part: The Ukraine is to have its own border and internal forces belonging only to it and will have a republican guard to defend state and government structures.

The chairman of the Ukrainian Supreme Soviet reiterated his belief that every possible defense is necessary during a putsch. During the 19 August coup, he stated: General Varennikov came into my office and put forward an ultimatum about being subordinate to the State Committee for the State of Emergency. I understood that I had no one to defend me, and I felt that armed people could come in at any time to take me away somewhere.

At the same time, Leonid Kravchuk stressed that the forces on Ukrainian territory had taken no part in the putsch and had acted in accordance with the laws and the Constitution. Therefore, he emphasized, we will defend the armed forces and will defend and support honorable people.

The reorganization of the Army is a complex problem demanding the participation of all interested sides, noted the head of the Ukrainian parliament. Therefore—and we have an agreement on this with the commanders of the forces of the military districts and commanders of the army subordinate to the center—at the moment the status quo in the armed forces will not be disturbed. This also applies to the reduction of the armed forces and to rearrangement of cadres. All changes in cadres should be directly agreed upon with the Ukrainian leadership.

USSR-German Agreement on Retraining WGF Troops

91UM0790A Moscow IZVESTIYA in Russian 9 Jul 91
Union Edition p 3

[Interview with Yuriy Zakharchuk, deputy chief of the main administration of employment of the Ministry of Labor and Social Problems, by N. Burbyga; place and date not given: "Soldier, Select Your Occupation!"]

[Text] A bilateral agreement "On Retraining the Servicemen of the Western Group of Forces Withdrawn From the FRG" between the USSR Ministry of Labor and Social Problems and the FRG Ministry of Foreign Affairs was signed in Moscow in the residence of the FRG ambassador.

Yuriy Zakharchuk, deputy chief of the main administration of employment of the Ministry of Labor and Social Problems, narrates.

[Zakharchuk] As early as October of last year, an agreement was signed between the governments of the USSR and the FRG, under which the German side undertook to allocate 200 million marks for the retraining of servicemen of the group of forces being withdrawn from Germany. The current agreement provides for setting up five model centers for retraining the servicemen and members of their families in the territory of the USSR. They will be located in the facilities of the present SPTU [Secondary Vocational and Technical Schools] in Leningrad, Minsk, Kiev, Alma-Ata, and Ramenskoye in Moscow Oblast. The Germans undertook to completely outfit these centers with the latest instructional and laboratory equipment. Another five centers will be outfitted in part. They undertook to develop modern curricula in cooperation with our specialists. The objective is to create educational establishments of a new type which will offer an education up to the secondary technical level. Suffice it to say that these are going to be multitrack educational establishments. Workers of various professions will be able to acquire advanced skills there. Professional orientation was determined by the needs of Union republics. They acted as customers. For example, the need for specialists in household appliance

and car repair, construction and other professions is acute in Kiev. In Ramenskoye, the demand is for agricultural workers capable of knowledgeably operating a proprietary farm. However, regardless of specialty, all graduates of the new educational establishments will be able to acquire commercial knowledge and experience. They will be prepared to work in the environment of a market economy, and they will master the foundations of operating a small business.

In setting up the centers, we strive to ensure that they have reliable sponsors who, on the one hand, will guarantee the placement of the graduates in jobs, while on the other, provide financial assistance with expanding up-to-date study facilities.

[Burbyga] Are you sure that those for whom these educational establishments are intended will study here?

[Zakharchuk] Yes. For example, in the spring we took a questionnaire survey in a number of units of the Western Group of Forces. The survey indicated that 63 percent of the servicemen polled stated their desire to study in specialized educational establishments.

Before each discharge, we will go to units and subunits where we plan to offer explanations and also to study demand.

[Burbyga] What will be done about officers who, as a rule, have a higher education?

[Zakharchuk] The USSR State Committee for Public Education is prepared to offer them an extensive network of professional development institutes. However, in this case we emphasize mainly enlisted men and sergeants rather than the officer corps.

[Burbyga] Why was the signing of the agreement postponed? Are difficulties involved in this case which occurred in conjunction with the implementation of the housing program for Soviet servicemen leaving Germany?

[Zakharchuk] No. These are different programs. Time was needed to refine individual articles, and for experts to produce their findings.

Discussion of AGS-17 Automatic Grenade Launcher

91UM0805A Moscow VOYENNYE ZNANIYA
in Russian No 2, Feb 91 pp 11-12

[Article by Eng S. Fedoseyev under the rubric "Conventional Weapons of the Nuclear Age": "The Devastating 'Plamya'"]

[Text] "The powerful missile headed for the target. The KPVT machine guns went instantly into action and were backed up by AGS-17s. A storm of fire swept down upon the villains...." This is how "Afghaner" Gds Capt L. Belyy recalls one battle with the dushman. The magazine's readers are familiar with the KPVT machine gun (VOYENNYE ZNANIYA, No. 7, 1986). But just what is the AGS-17?

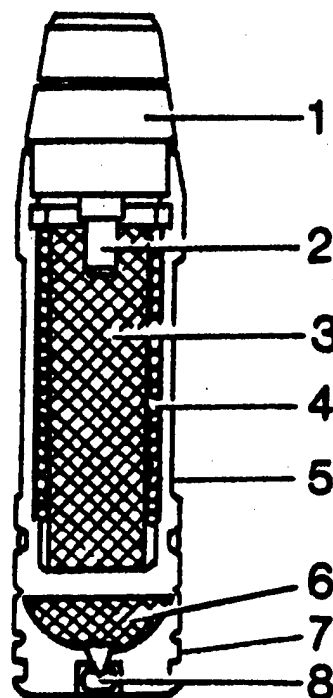
The 30 mm AGS-17 Plamya mount-type grenade launcher, which joined the Soviet arsenal in the mid-70s is a team-operated automatic weapon designed for destroying enemy personnel and exposed weapons. It is a distinctive launcher with matching ammunition.

The grenade launcher fires a 30 mm fragmentation round in which the cylindrical casing encloses the grenade and ready-formed shrapnel, a propellant charge and a percussion cap. The powder charge weighs relatively little, since it is designed only for putting the grenade into a high-angle trajectory with a large angle of descent, which ensures effective fragmentation action (a reliable destruction radius of around five meters). The grenade is stabilized in flight by rotation imparted to it by the grenade launcher's rifled barrel. The AGS has a short barrel, since the grenade does not require a large initial velocity, which is only 185 m/s. Its maximum firing range is 1,700 meters with a trajectory altitude of 380 meters.

The Plamya's automatic action is simple, utilizing the recoil of a free-moving breech mechanism. Briefly, its operating principle is the following. After firing, the breech mechanism, which is not connected to the barrel, begins to be moved backward by the force of the recoil, simultaneously compressing the recoil spring, extricates (extracts) the spent jacket from the breech piece and removes it by means of an extractor. The triggering device is cocked simultaneously. Upon reaching the extreme rear position the breech mechanism is moved forward to the barrel by the force of the recoil spring, clamping the next grenade in the process, loading it into the barrel and closing off the bore with its bulk. At this point, if the launch lever is pressed, another round is fired. For manual reloading there is a T-shaped control near the rear bulkhead, connected to the breech mechanism by a steel cable. Below that is a launching control in the form of a wide key.

The AGS-17 has two firing modes: single-round and automatic. Its effective rate of fire in the single-round mode is 50 rounds/min; 100 in automatic ([possible] rate

30 mm Fragmentation Round



Key:

1. Fuze
2. Detonator
3. Bursting charge
4. Ready-formed shrapnel
5. Grenade body
6. Propellant charge
7. Shell case
8. Percussion cap

of fire, 350 rounds/min). The outer surface has scroll-patterned grooves to facilitate cooling of the barrel. If it becomes overheated during firing, it can rapidly be replaced in the field.

The grenade launcher is belt-fed. The metal belt assembly is attached to the right side. During reloading the motion of the breech mechanism is used for removing the next round from the belt and feeding it to the loading line and for activating the belt-feed mechanism.

The operator uses two horizontal levers in the rear section of the weapon for laying. He presses the launching control with his thumb. The AGS-17 is fired from a tripod mount. The grenade launcher can also be mounted on an armored vehicle (with an electric launching mechanism). It has a crew of three. Its most effective firing range is up to 800-1000 meters.

One of the main features of an infantry weapon is its mobility on the battlefield. This is determined primarily by its weight. The "body" of the AGS-17 weighs 17.7 kilograms; 45 combined with the mount and belt

assembly. The crew can move the grenade launcher, the mount and the belt separately, and when necessary it is perfectly possible for the operator and his assistant to move the grenade launcher to a new position right on the mount.

And so, what we have is an automatic support weapon capable, as already mentioned, of destroying enemy personnel and weapons exposed or located behind terrain irregularities or in trenches. In addition to its effective rate of fire, its advantages include its close grouping of fire (better than that of a light mortar), the short time required to set it up and open fire, the possibility of rapidly altering its firing range and direction, and its flexibility in combat.

The TOE of a motorized rifle battalion includes a grenade-launcher platoon: three squads, each with two AGS-17 Plamyas and crews. In combat it is ordinarily under the total command of the battalion commander, which makes it possible to concentrate the greatest density of fire for the subunit's main effort on the main axis. What missions does the platoon perform in combat?

During an attack it helps provide fire support and supports forward-echelon companies, advancing either behind their battle formations, between them or on their flank. If, while executing a march, the battalion engages in a meeting battle with the enemy and has to take up a position and open fire rapidly, for example, the grenade-launcher platoon provides effective support for the advance guard and covers the deployment of the main battalion forces.

In a defense the grenade launchers engage in short-range barrage fire, destroy the enemy with concentrated fire and cover the flanks. When the combat situation demands greater independence for the companies, the grenade launcher platoon can be attached to them by squad.

The automatic grenade launcher has a particularly large role in an encounter on extremely rough terrain, in woods, in mountains and in populated areas. The AGS-17 can take part also in the laying of smoke screens to

cover our subunits or to blind the enemy's weapons. Its basic ammunition includes a special smoke grenade for this purpose.

Tested in combat in the mountains of Afghanistan, the AGS became a solid part of the fire system at fortified "sites" and areas and of the security forces for vehicle columns. It also "operated" in ambushes, blocking the enemy with fire in narrow mountain passes. At times the Plamya was the only support weapon a subunit could take with it up into the mountains.

And what is the situation with respect to these weapons abroad?

Even during the Vietnam War the U.S. Army was using an automatic grenade launcher on its combat helicopters. Not until 1981 did the American Marines receive the mounted 40 mm Mk19 automatic launcher. Its automatic action is based on the recoil of its short-stroke barrel; it is belt-fed (20 and 50 rounds); its controls consist of two vertical handles in the rear section; a flash inhibitor is mounted on the end of the barrel. It is fired from a tripod mount. The Mk19 is also mounted on armored vehicles and army motor vehicles. Its basic ammunition includes fragmentation and shaped-charge fragmentation rounds (for firing at light armored vehicles). The Mk19 with tripod weighs 35 kilograms; firing range, up to 1,600 meters; rate of fire, 350-400 rounds/min.

At a weapons exhibit in Ankara in May 1989 Romania displayed a 40 mm automatic grenade launcher on a tripod. It is fed from a drum-type magazine with 10 rounds; it has a flip-up folding-leaf sight; it is controlled with vertical levers; its weight with mount is 35.5 kilograms; its firing range with fragmentation grenades is up to 1,300 meters; it has firing modes of single rounds or a burst of 2-3 rounds.

Recently the Santa Barbara company of Spain exhibited its own model of a 40 mm mounted automatic grenade launcher, the S B40 LAG, which has a firing range of up to 1,500 meters.

And so, mounted automatic grenade launchers are regarded in many countries as an important and extremely promising component of their firing arsenals.

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Profile of a TU-95MS Training Flight

91A50226A Moscow KRYLA RODINY in Russian
No 2, Feb 91, pp 3-5

[Article by Yevgeniy Podolnyy: "Selection of a Star"]

[Text] It finally happened: correspondents from our magazine have been authorized to be crewmembers on a missile-carrying TU-95MS during a long-range multi-hour flight. The flight route will extend into the neutral waters of the North Arctic Ocean near several foreign states. Just this circumstance alone imposes a special responsibility.

Long Range Aviation Navigator, Major-General of Aviation Vladimir Yegorov conducted the training in his office near an enormous globe. He described one of the super long-range flights "around the globe." He himself participated in it, 34 hours in duration and with three air-to-air refuelings. Editorial Staff Chief Artist Andrey Grishchenko and I do not have any experience with such flights. Well, we will train you...

We agreed: I will fly with the crew of Group Commander Lieutenant Colonel Vitaliy Khabarov and Navigator Major Yevgeniy Krytsyn. A. Grishchenko will fly with the second crew where the commander is Major Vladimir Rudykh, the navigator-examiner is Colonel Gennadiy Oshlakov, and the aircraft navigator is Captain Anatoliy Polkovnikov.

Colonel Mikhail Bashkirov told us many interesting things during the training session. And Regimental Commander Yevgeniy Vinogradov strictly reminded us during the pre-flight briefing:

"If you encounter foreign combat aircraft on the flight route, do not conduct maneuvers or manipulate onboard weapons systems!

The TU-95MS is a real giant. The missile-carrier was developed nearly 40 years ago, still during the "pre-missile" era. Indeed, it has been extensively modernized and now serves under the new designator "MS." It has all of the same external contours: a very long extension of the fuselage, a high tail, and a powerful swept wing. But it is already of a different design—with a finer, high-speed profile. The stabilizer on this model changes its rigging angle in flight depending on changes in the center of gravity that are associated with fuel consumption. Yes and the speed is striking for a propeller aircraft of this class.

But the main thing is the aircraft's dignity—its unique, one could boldly say, incomparable NK-12MP turbo-prop engines. The service life of these engines is 10 times greater than of any modern bomber, including foreign bombers!

And here is the cruise missile. It lies peacefully on the closed cargo door. You can touch it with your hand. Its nose section contains a computer with its memory

recorded on tape. The main thing is to launch it at a precisely calculated point. It will find the target by itself.

Take-off has been authorized. We rush down the runway. Lieutenant Colonel Khabarov controls the direction using the precise engine pedals and smoothly pulls the yoke toward him. Speed 300—rotation, initial climb.... The landing gear and the flaps have been retracted. Yuriy Zotov helps the commander to fly the heavy aircraft. We break through the cloud cover and bright sunlight pours into the cockpit. Lights blink, instrument needles nervously jump, and indicators "breathe" on the pilots' instrument panel.

For Flight Engineer Major Leonid Kasyanenko, right now the main thing is to adjust all of the aircraft's systems and units and to prepare it for a prolonged air marathon. Of all of the instruments on the pilots' instrument panel, two are especially interesting: the PNP—pilot-navigation instrument by which one can determine the actual track line, drift angle, and direction to the homing station, and the attacking fighter aircraft and missile detection instrument. This instrument indicates azimuth and range. The missile-carrier's entire power system is concentrated in Kasyanenko's hands. The operation of the powerful engines, electrical generators, power consumers, and instruments—everything is controlled on his huge control panel with its hundreds of instruments and switches.

The main brain system—two onboard computers—are in the hands of Navigator Yevgeniy Krytsyn. They carry out not only complete automatic calculation of the track and control the aircraft's precise location, but also all adjustments to the autopilot's servo units. Say, the wind has changed and the aircraft has deviated from the assigned track line. The computer immediately calculates all errors, independently calculates course corrections, issues the command to the autopilot, and returns the aircraft to the true course.

With the aircraft commander's permission, I move closer to the navigator, don my parachute, and adjust my oxygen mask. Altitude 7,500 meters and I experience oxygen starvation. Now I am lying down facing forward. There is a window to my left. Beyond it—the indefatigable NK-12's six-meter long propellers diligently spin. Visibility is unlimited. Here, in the northern latitudes, there is a clean, seemingly frozen, pale-blue sky. Below there is dense strato-cumulus cloud cover—about five balls and above there are silver veils of cirrus clouds. And in the cockpit, there is semidarkness, the needles of the instruments on the navigator's instrument panel are phosphorescent, and electronic annunciator panels flash with the designation of altitude, speed, and course.... And "maneuver!" will suddenly flash. Then you become more alert.

And there is one more amazing instrument. Numbers, that designate longitude and latitude, display the aircraft's exact position relative to the earth on a special electronic annunciator panel. The system coordinates'

minutes flow by and the seconds leap. You look at them and sense that our TU is scrambling toward the North Pole.

We have already passed over the White and Barents Seas and we are now "stamping our feet" along Norway's neutral waters. Second Navigator Lieutenant Oleg Svatalov, the youngest member of the crew, sees pulsating blips on his onboard defense system indicators and immediately reports to the crew commander. He briefly explains to me:

"Do you see? A foreign radar picket ship is illuminating us."

When the situation had improved, I asked Svatalov: Why do you not turn on the jamming?"

"You remember the regimental commander's order during the pre-flight instructions: Do not manipulate weapons? The jamming system is also a weapon. By not turning on the jamming, we thereby indicate that we do not intend to attack and that we are conducting this flight for training purposes only."

Krytsyn jumped over to me: Be alert. We will be combining the initial data with real data in the missile's computer and we will make corrections to the coordinates system. Then—there will be a simulated launch.

I had hardly managed to grab the handrail when the enormous aircraft entered a deep bank with a decent G-load and then abruptly, like a fighter aircraft, carried out the opposite maneuver. Such "pirouettes" take your breath away.

Here the navigator also conducted an extremely amusing dialogue with... the missile. Krytsyn entered into the computer keyboard the required, in his opinion, data for a missile launch—time and target coordinates. The computer, not taking too long to think with its electronic brain, sends a response which lights up on the annunciator panel: "Give me a later time!". Krytsyn "coaxes" the missile and selects new adjusted data. The inscription on the annunciator panel: "Wait for a response." And finally: "I am giving you the readiness time—five minutes!".... In short, this stubborn "aunt" from the cargo door also demands special attention to itself.

Suddenly Tail Gunner Warrant Officer Andrey Guslenko reports on the SPU [aircraft intercom]: "To the rear and left along the course—fighter aircraft! Range—30."

I literally became stuck to my window and saw two dark dots approaching Wingman Major Rudykh's TU-95 from the rear. They "attack" from the rear hemisphere. I mentally imagine how Tail Gunner Sergey Razora simulates repelling the "attack" and how our temperamental Grishchenko is throwing his cameras around.

The fighter aircraft approach us and form up their "honor escort" near the wing root. Navigator Svatalov and I click the shutters of our cameras. About 40 meters

away is the magnificent F-16 Fighting Falcon aircraft, needle-nosed, with a powerful engine, a broad tapered wing, and missiles under the wing roots. The NATO pilot in orange coveralls and protective helmet is clearly visible. He is also taking pictures (I have no doubt that he liked the TU-95MS) and is amiably waving to us. Yes, times are changing....

Ships are visible below in breaks in the clouds but it is difficult to determine their nationality. But here are more aircraft: an Orion reconnaissance aircraft and a VS-10 tanker flies by that reminds me of our IL-62.

We have already been in the air for many hours. I can feel the fatigue. And suddenly my sense of smell detects the appetizing aroma of stewed meat and tea. Duty "cook" Oleg Svatalov also brings hot vegetables on plates from the oven. A brief meal in the stratosphere over the Arctic Ocean is not an ordinary phenomenon. We fortified ourselves. Thanks to the quartermasters with their additional duty: they successfully carried out the food program at the home garrison.

We turn onto the reverse course. The insidious fatigue that the experienced aviators warned us about makes itself known. I increasingly use the oxygen mask and it is like the ends of my fingers are being pricked with needles.

We descend to 6,000 meters and decrease speed.... The "Linkup" instrument indicator blinks on the navigator's annunciator panel and numbers appear: 50, 40, 35.... A refueling aircraft is on the approach. We look to the right from our course. An IL-78 refueling aircraft, just like a skater on ice, is skating along 300 meters below us, skidding just above the clouds that are solid like on a frozen crust on snow. It has passed us and "dropped anchor" about 20 meters from us. It has released from its belly [chrev] the hose and drogue which literally appears five meters in front of our aircraft's probe. Do not miss, commander....

Zotov's hand is on the "throttles." He energetically reduces power if the probe begins to overtake the drogue and does not end up in it. The commander's task is to gently bring his giant's nose up to the drogue. The probe has touched the delicate edge of the drogue.... Just one more precise movement of the controls—contact has been carried out. Now the engineer receives fuel. But the pilot is on alert as before: the slightest mistake—can tear out the probe and douse the missile-carrier with streams of kerosene.... No, Khabarov will naturally not permit this: 3,000 flying hours and eight years of work on "95's" count for something!

The refueling has been completed. All of the valves have been closed. The operator on the IL-78 smoothly retracts the hose. A powerful bang sounds. Kerosene spray douses our cockpit. The tanker moves off to the side. The operator in the tail section waves to us.

They say pilots lose up to four kilograms of body weight during each refueling. I told Khabarov about this but he only waved his hand:

"That is an impermissible luxury for me."

Vitaliy Spiridonovich is actually short but strong. I think that he is obliged to do this through his long friendship with sports and, well naturally, through the impeccable flight training. Incidentally, both he and Copilot Zotov—both graduated from Tambov VVAUL [High Military Aviation School for Pilots]. And Navigators Krytsyn and Svatalov are also fellow students—from Chelyabinsk School—ChVVAUSH [Chelyabinsk High Military Aviation School for Navigators].

The navigator presses the keys and assigns the celestial navigation system the task to find any brighter star for him. It selects a star in the starry sky using an optical device and, according to the system of coordinates, displays a number on the electronic annunciator panel: "I have selected star No. 2". A second similar query—and once again the answer: "I have selected star No. 34." Then very complicated integral calculations are performed in the system of electronic devices—and the final result is ready: "Enter a course correction in four minutes!" I ask Yevgeniy Vitalyevich in amazement:

"But do we really not know which star No. 34 equates to?"

Krytsyn nearly dies laughing:

"The computer does not know what we do not know!"

We are flying to the south. We have passed Arkhangelsk and we are abeam of Moscow. The second navigator beckons to me and asks me to approach:

"Have you ever seen Moscow from space?"

I do not know how to react to this joke. But it turns out that this is no competition. Svatalov explained:

"Moscow is 100 kilometers away from us. It is entirely appropriate to call this distance 'space.' There it is, fall in love with it!"

I saw "live" Moscow with its square areas and the precise lines of the major streets and prospekts for the first time on the screen.

Several more hours of flight pass. We are descending. Khabarov reduces speed, the powerful engines are operating at half-speed, and we descending from altitude. The small of my back and my shoulders ache from the tension. My feet feel wooden. And what awaits the aviators on the ground? Rest after the flight? Yes. And hopeless lines for apartments, unemployed wives, the lack of schools and kindergartens, and the empty shelves of the military exchange stores. Salaries are two times less than that of an interurban bus driver and 10 times less (!) than a shish kebab-cooperator. And the main thing that remains with the aviators is what they will not

sell for any amount of money—human dignity and their favorite profession. Like that computer—they have selected their bright star.

The dear earth is ever nearer. Our missile-carrier flies over the landing strip in the blue rays of the searchlights with wings lowered as if from fatigue.

On the ground, Copilot Yuriy Zotov came up to me and handed me three small cans of juice from the inflight meal:

"Keep them, you earned them. Not everyone had time to drink them during the flight."

I am keeping them, the cost that is stamped on the tin cans is not even 20 kopeks....

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Yakovlev's Chief Pilot Discusses YAK-141

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[Interview with Experimental Design Bureau imeni A.S. Yakovlev Chief Pilot and Deputy Chief Designer for Flight Testing Andrey Aleksandrovich Sinitsyn by KRASNAYA ZVEZDA Correspondent Major S. Prokopenko: "The YAK-141: The Aircraft, People, and Problems"]

[Text] Familiarization with the Soviet YAK-141 Supersonic Vertical Take-off and Landing Aircraft became an unexpected development for experts and the press at the International Aerospace Show at Le Bourget. "The YAK-141's appearance shocked the West whose development of supersonic VTOL's has turned out to be surpassed," stated the English magazine FLIGHT INTERNATIONAL. KRASNAYA ZVEZDA has already described this achievement of native aircraft construction. Today, we are acquainting our readers with Experimental Design Bureau imeni A.S. Yakovlev Chief Pilot and Deputy Chief Designer for Flight Testing Andrey Aleksandrovich Sinitsyn. He flew the YAK-141 for the first time and "taught" it to fly. However, our conversations with Sinitsyn were not limited to the framework of developing and testing this aircraft....

"Of course, the YAK-141 is a complex aircraft," said Sinitsyn. "And primarily due to its saturation with electronics. Electronic control of the engines and all aircraft systems that are subjected to colossal acoustic and vibration stress and, in some places, to thermal stress in flight. Therefore, we needed to predict the aircraft's behavior in the event of any system failure. The first test flights in the YAK-141 demonstrated that the aircraft was both successfully designed and built.

"First of all, this applies to the engines. They permit us to carry out take-off and landing in the afterburner mode and to attain a speed of 1,800 kilometers per hour. And I think that this is not the limit. These were the only conditions when the engines were being designed: they promised both new materials and advanced technology

but when we neared construction, the initial data changed: we either did not have one or the other, you see, and the weight was 'creeping up.' This is a sore point for any aircraft and particularly for a vertical take-off aircraft. So the engine designers have still not had the last word. And this is while considering that the YAK-141 has established a time-to-climb record for this class of aircraft! Incidentally, this record was established twice. The aircraft reaches an altitude of 12,000 meters in less than two minutes. This is impressive.

"This aircraft is exceptionally dynamic both in acceleration and in deceleration. The landing distance is two times less than in the YAK-38M."

The primary work in the life of a test pilot is rough and frequently thankless. And a celebration like taking off in a test aircraft is extremely rare. Yes and it falls to the lot of far from everyone. There were thorns on Andrey Sinitsyn's path to his celebration.

If we can talk about being predisposed toward a profession, then we can say that Andrey was lucky on this score. His father—Aleksandr Aleksandrovich—is an engineer-designer who worked at the Experimental Design Bureau imeni A.S. Yakovlev for a long time. His mother also worked there during the war years. His grandfather—Ivan Nikolayevich Vinogradov—was a pilot. And it is no wonder that a lad who grew up in an aviation family would dream about the test pilot profession.

Sinitsyn became a MAI [Moscow Aviation Institute imeni Sergo Ordzhonikidze] student. At that time, a group of students gathered at the institute whose thoughts about the sky did not provide them any peace. They all arrived together at the Central Aeroclub imeni V. Chkalov. Of the seven students who graduated from the institute, only four continued to fly and Sinitsyn became a master of aircraft sport.

With his graduation from the institute came the recognition that it was practically impossible to become a test pilot with only DOSAAF training behind him. But he was the only one who managed to achieve that at that time, to insist on an allocation at the Test Pilot Institute imeni M.M. Gromov.

The work turned out to be interesting. Sinitsyn joined a group that was conducting MIG-23 spin tests. He became acquainted with pilots' work here. And he rushed to the aeroclub to fly on his days off. And for some reason Deputy Head of NII [Scientific Research Institute] for Scientific Work A. Mironov summoned the young specialist to his office. The question was posed pointblank: "I need an engineer who ponders the problem on Saturdays and Sundays and does not run off to the aeroclub."

And then Sinitsyn dared to take a desperate step—he went to see the head of the test pilot school. It is easy to imagine the astonishment of Lev Vasilyevich Fomenko, who headed the school at that time, at the sight of a young engineer on his doorstep who was stating his

intent to become a test pilot. Fomenko had never before experienced this. In order to somehow smooth out the awkwardness of the moment, he advised Andrey to become familiar with the acceptance regulations. By that time, Sinitsyn practically knew them by heart: flying time in supersonic aircraft—no less than 1,000 hours.... And so on in that same spirit. How could he get there with aeroclub flying time in a piston engine YAK-18?!

"Well, do you understand everything now?", asked Fomenko.

"Yes. But I still want to become a test pilot...."

It is hard to say what Fomenko thought about this extremely stubborn lad at that time but he proposed that he work at the ShLI [Test Pilot School] as an engineer as a start.

Peoples' fates take shape in various ways. For some, the path to their dream reminds us of the rapid take-off of a jet aircraft, for others, they are like mountain climbers on the path to the summit and they overcome ledge after ledge, step after step. For Sinitsyn, work at the test pilot school became his next step. Here he passed the medical flying commission. "Qualified for test-pilot flying duties without restrictions." It was during this period that Sinitsyn learned that the YAK-18T was being placed into series production at Smolensk Aircraft Plant. His native aircraft! And he once again, for the umpteenth time, crossed the threshold of the test pilot school chief's office.

"Well, where will I send you?" Fomenko, a serious and thorough man, began to list plants. "Here is the SU-17, there is the MIG-25... How will you fly in them?"

"What about Smolensk?"

Sinitsyn's knowledge somewhat took him aback, however Fomenko remained adamant....

But Sinitsyn stood his ground. A summons to the head of the school ultimately followed.

"We will test your flying technique and we will later resolve the issue of enrolling you in the school...."—these words were music to his ears.

However, fate had prepared one more trial for Sinitsyn. He had to pass a test on flying technique. But the sky was overcast on Friday, the day of his flight.

"It looks like we may not be able to do anything with you today, Andrey Aleksandrovich. Be ready on Monday," said the instructor.

But on Saturday, Sinitsyn was taken to the hospital with an acute attack of appendicitis. When he saw him after the operation, Fomenko just threw up his hands....

"Of course, there were difficulties during YAK-141 testing," recalls Andrey Aleksandrovich. "Everything was occurring in the background of our perestroika

when confusion reigned everywhere. As a result, they stopped financing the program to develop the new aircraft. But nevertheless we managed to perform a colossal amount of work during the next two years.

"But right now due to the cessation of financing, we have reached a dead end. The Experimental Design Bureau has not been granted the right to transfer resources from one program to another. The situation reminds me of a vertical take-off and landing aircraft that is frozen in the hover mode. The hitch is that it cannot hang like that for a long time—it will crash.

"In my opinion, this is a horrible picture according to a whole series of indicators. First, judging by the situation, our military does not have a precise, verified doctrine right now. We have to listen to opinions like this at an adequately high level: 'But why do we need such aircraft? They do not have any like them!' This principle is operating: Catch up but do not move ahead. But we know that the Americans, jointly with the British, are working on the development of an aircraft of this type. They plan to put it into series production after the year 2000.

"And the second important factor. The Experimental Design Bureau imeni A.S. Yakovlev is the only one in the country which is involved in the development of vertical take-off and landing aircraft. And if we cancel this program right now then, figuratively speaking, the thread will be broken. And it will be very difficult to catch up later while jumping across the steps."

Right now it is difficult to assume how Andrey Aleksandrovich's future fate would have developed if Oleg Georgiyevich Konstantinov—then deputy chief of the test pilot school for scientific work—had not influenced his life's path. He himself worked on aircraft engine tests for a long time, including during flight, he knew how difficult it was, and he understood Sinitsyn's aspiration. In what appeared to be a dead end situation, he went to the ministry. What was said in the offices of the leadership during the span of two hours still remains a secret. He was relieved when the returning Konstantinov smiled: "You will learn!"....

"It is painful to admit at times," Sinitsyn continues the conversation, "that the efforts of entire collectives of aircraft developers, builders, and testers are reduced to a single decision. Unfortunately, our military pilots are using the aircraft in far from the full range of its capabilities. By way of illustration, carrier aviation pilots in YAK-38 aircraft do not fly with belly tanks. And this would substantially increase the operating radius of these aircraft.

"Incidentally, this is the way matters stand not only with our aircraft. Not too long ago, Experimental Design Bureau imeni A.I. Mikoyan test pilots visited a regiment. The picture was the same there. The operating G-load in a MIG-29 is plus nine. It has already been established at the unit—no more than six. And it is this way for many parameters. What sort of combat readiness and combat

capability can you talk about when a pilot does not even have any idea of the aircraft's potential?!"

Six years of work as a tester at series production plants provided Sinitsyn with the needed experience and, the main thing, the confidence in himself and in his own strengths.

During the summer of 1979, when Sinitsyn was in Moscow on business, Experimental Design Bureau imeni A.S. Yakovlev Chief Designer K. Bekirbayev invited Sinitsyn to his office. He offered Sinitsyn a job at the "firm." Andrey Aleksandrovich accepted immediately.

They put the new pilot to work quite rapidly. He began to intensively master the YAK-40 and YAK-42. However, the thought of flying vertical takeoff and landing aircraft had already begun to eat away at his professional pride. And after a year, Sinitsyn requested a transfer from Bekirbayev.

The unusual aircraft required other skills. Andrey Aleksandrovich had to master the MI-4 and MI-8 helicopters. Hero of the Soviet Union, USSR Honored Test Pilot Mikhail Sergeyevich Deksbakh tested Sinitsyn's skills and gave his approval. And this man's opinion was especially cherished. It was he, as they say, who assumed the primary load for testing and refining the YAK-38 aircraft. He also carried out the first landing on a ship.

That is how Sinitsyn's "vertical" flights began. And I would be a hypocrite if I said that everything went smoothly here. There was a period when he did not fly for nearly a year. He maintained his skills on the MIG-21. Then the YAK-38M was modified. And they trusted Sinitsyn to participate in the test program of this aircraft as the understudy for Honored USSR Test Pilot Yuri Mitikov.

Once, a surge of the vectored-thrust engine on the YAK-38M aircraft occurred at the series production plant. They had to investigate the cause of the accident. Essentially, the test pilot had to induce a critical situation in order to then look for a way out of it.

Sinitsyn managed to "catch" the surge only during the third or fourth mode. At that, in his words, it was "mean and vigorous." It was as if the engine had stalled. And although the pilot knew what was going to happen and expected it—everything happened unexpectedly. In such situations, the brain does not work and the motor system—is a clot of experience carried away from all of the preceding flight time. Later, when the objective monitoring data was deciphered on the ground, they ascertained that one and a half seconds had passed from the beginning of the surge until the pilot shut down the engine.

They became seriously involved with the problem. Anti-surge protection was installed on the engine as a result of their studies.

With time, Andrey Aleksandrovich was designated a senior pilot, or, as it is fashionable to say here, chief pilot. His worries increased.

It would seem that test pilots are the elite of aviation! But this is just a facade, the external side. And behind it is a salary of 420 rubles, a housing list which test pilots join on equal grounds, and a room in a hotel where he is cooped up with his family for years.

"I just recently returned from Le Bourget," said Andrey Aleksandrovich, "where the International Aerospace Show took place. I frankly admit that I did not think that everything had gone that far in our country. Our pavilion did not look so.... Probably if they would conduct these

shows on aircraft industry conversion, we would have thundered with our own frying pans and vegetable cutters there. It is gratifying that only the "Albatros" ended up among the exhibition's favorites. But for a country like ours, this is more than modest. We can explain the situation—the crisis in the economy has also had an impact on aircraft construction: financing is being reduced, programs are being terminated, and flight tests have been reduced to a minimum.... It is painful for me to see how our native aviation is beginning to decline before my very eyes! A year or two more will pass and we will have to use hard currency to buy Boeing aircraft for our passengers and F-16's for our military pilots. Who gains from that?

R-Adm Beznosov on Development of Science in Navy*91SV0031A Moscow MORSKOY SBORNIK in Russian No 4, Apr 91 (Signed to press 26 Apr 91) pp 23-26*

[Interview with Rear Admiral V. Beznosov, chairman of the Navy's Committee for Science and Technology, by Captain 1st Rank G. Shestakov, under the rubric "Scientific Support of the Military Reform": "Orientation Toward Qualitative Parameters"]

[Text] Science has an important role in the military reform process. It must ensure that maximum use is made of the results of basic and exploratory research in the development of new, more effective and economical means and methods of conducting warfare, and the improvement of weapons and equipment based on the latest achievements of science and technology.

In view of the interest of naval personnel in the development of science in the Navy at the contemporary stage, the editors asked Rear Admiral V. Beznosov, chairman of the Navy's Committee for Science and Technology, to answer a number of questions.

[Shestakov] Vyacheslav Nikolayevich, apparently not all of the readers know what kind of system of scientific organizations the Navy has. Could you tell them a little bit about it?

[Beznosov] The Navy's present system of scientific research institutions (NIU) has been developed mainly during the past 50 years. Today it forms a specific scientific complex, fairly large compared with those of the other branches of the Armed Forces of the USSR, and includes specialized scientific research institutes and centers, experimental facilities, testing grounds, and the problem-focused and research laboratories of our higher educational institutions. The extent and the multilevel nature of the scientific research are due to the specific essence of the Navy. After all, the modern navy has practically all the types of weapons and equipment used in all the other branches of our Armed Forces and troop arms. Furthermore, our scientific research institutions conduct both comprehensive and system-specific research in the general problems of development, organizational development, training and employment of the Navy's forces in the contemporary situation and for the future, as well as those involved in the development of naval art.

[Shestakov] The military reform is still being discussed in the future tense, but certain changes have already occurred in recent years within the system of scientific research institutions and in certain other components of the Navy. Just what are these changes, and what is their purpose? Have the projects performed by naval scientists themselves changed?

[Beznosov] Indeed, nothing stays the same in life, and our system of scientific research institutions is changing in complete accordance with the laws of dialectics. This

is necessitated by the fact that we must improve the way we solve our scientific and technological problems and bring the system into conformity with the demands of the times. The latest changes occurred in 1988-1989 when, following the government's well-known 1986 decree "On the Functioning of Branch Scientific Research Institutes," structural changes were effected also in the Navy's system of scientific research institutions. Their number was cut almost in half by consolidating a number of them, which gave them a more highly developed laboratory and experimental base. The total number of scientific workers was also reduced, and the ratio between military workers and civilian employees was altered, with an increase in the latter.

Our system of scientific research institutions can now be considered nearly optimal, and in general it provides for the accomplishment of our specific missions, which have basically remained the same.

The Navy's scientific research facilities were converted to economic accountability in 1989. For the first time in military praxis administrative methods of managing science have been supplemented with economic methods. A new planning and wage system has been introduced as an effective factor for improving the research and its results and for reducing the time required. The independence and responsibility of managers at all levels have been increased. I must say that we are not satisfied with everything, however.

[Shestakov] The problem of increasing the return from science is presently one of the most acute in our nation. At the same time, we prided ourselves until recently on the fact that almost half the people working in science in the entire world were in the USSR. Just what is the Navy's scientific capability?

[Beznosov] It depends not only upon the numbers of scientists and teachers of science, but also upon the quality of the information support and upon the level of technical equipment of the laboratories and experimental facilities. The people, our pool of scientists, are unquestionably the determining factor.

At the present time naval science is represented by a large group of credentialed scientists in various scientific fields, every tenth one of whom is a doctor of sciences. They include professors, honored figures in science and technology, and a corresponding member of the USSR Academy of Sciences. Approximately half of them are involved in the development and operation of weapons and equipment; around 30% of them in the field of naval art and research in operations and command and control.

Our Naval Academy, truly a center of scientific thought for the navy, stands out among the Navy's scientific establishments for its scientific staff and for the level of its scientific methods and its actual contribution to the practical functioning of the fleets. A total of 19 specialized scientific councils for awarding the academic

degrees of candidate and doctor of sciences function at the academy, at the institutes and schools.

At the same time the composition of the scientific corps does not fully meet our needs. In recent years the Navy has begun relinquishing its forward positions in the training of scientists and teachers in the sciences. We have started to fall perceptibly behind the other branches of the armed forces in the degree to which we are provided with them. The Navy's command element is presently taking steps to rectify this situation within the next five years.

[Shestakov] You have already mentioned the fact that the Navy's scientific research institutions conduct research in numerous areas of the functioning of the Navy and prospects for its development. Even a brief description of each would require a substantive, separate discussion. Nonetheless, in general terms, how would you evaluate the effectiveness of our scientists and their contribution to the solution of the Navy's problems, particularly in today's difficult situation?

[Beznosov] It is believed—and generally speaking, justifiably—that everything our navy has and everything it will have in the future is a result of the work of the scientists, workers, engineers and technicians of hundreds of scientific and industrial organizations, literally of the entire nation. No one doubts this commonly known fact. However, we cannot simply premise this, as is frequently done, on the modest stipulation: "with the participation of military specialists." After all, everything entering the navy has passed in one way or another through our scientific research institutions, has been conceived, produced or polished up by them or under their supervision. The quality of what has been achieved is another matter, however, and it must be admitted that this is far from always what one would desire. This is a subject of special concern to us.

Nonetheless, it is the navy scientists who work out the scientific substantiation for the main areas of development of the Navy's weapons and equipment and perform a large amount of scientific research. The assignments are made to the planning organizations based on the results of this scientific research. Our scientists then provide scientific oversight and monitor the work as it is performed in industry. They participate in the testing of new ships, weapons and equipment, help the fleets master their operation and prepare instructions and manuals on their combat employment and maintenance.

I would mention just a few of our many prominent scientists who have made a personal contribution to science. They include Vice Admirals M. Budayev and V. Lisutin, Rear Admirals F. Matveychuk, Ye. Mnev and S. Svirin, Captains 1st Rank L. Khudyakov, G. Velichko, E. Symikov, Ye. Prokhorov, B. Ivanov, G. Ilin, I. Popov and V. Saprykin, doctors of sciences and professors, Rear Admiral Yu. Alekseyev and Captains 1st Rank N. Dvoryakin and V. Molokoyedov, candidates of sciences, and many, many others.

Also important is the fact that a number of developments achieved by our scientists have received recognition not just in our country, but also abroad. They include, among others, the works of Rear Admirals I. Ryabinin (in the theory of reliability of complex systems) and V. Byrin (technical diagnostics) and Lieutenant Colonel V. Semko (underwater physiology), doctors of technical sciences and professors.

[Shestakov] I feel that what you have told us will help our readers to gain an idea of the scope, the significance and complexity of the work of naval scientists and certain of their achievements. But then, among the causes of the acute problems encountered by the Navy in recent years—the quality and reliability of the equipment, for example, the accident rate and survivability of ships—there are also deficiencies on the part of our scientific research institutions. What is the cause of this dissatisfaction?

[Beznosov] The Navy's existing system of scientific research facilities is certainly far from perfect with respect to its organization and functioning and, most important, its effectiveness and the return from it. There are many causes and many difficulties. I shall name just a few.

First of all, there are deficiencies in the economic accountability model adopted at the institutes, which has two financing systems functioning simultaneously: one based on state budget, the other a contractual one. This causes difficulties in executing joint projects and hampers the efficient integration of the scientific forces. It makes it unprofitable, for example, to fill individual, direct orders for scientific and technological products for the fleets, which, of course, do not have specially allocated wage funds. For now, they have to go through the central directorates in each case.

In addition, we are not yet prepared to operate in the situation of market relations in the nation. This requires major changes in the organization of many aspects of the functioning of the scientific research institutions, which will account for most of their military reform.

The matter is also complicated by a significant degree of monopolization of individual areas of the scientific work, which, combined with the shortage of funds, is making it difficult to adopt the competitive system of development or to enhance its scientific and technological level through competition among those performing it. An example of this is the monopoly enjoyed by scientific schools at the institutes, which frequently hampers the implementation of the results obtained in the problem-focused laboratories and in the departments of the academy and the schools, which, in turn, results in inadequate use being made of their scientific capabilities.

We have recently seen an unfavorable trend in the form of an acceleration of the "brain drain" from the Navy's system of scientific research institutions, in which our prominent scientists, upon being released into the

reserve, go into other sectors with better rewards for the application of their experience and know-how. Unfortunately, there are no such opportunities at our scientific research institutions where they previously served.

These and many other issues are the focus in the development of measures to improve the scientific work.

[Shestakov] They obviously call for certain changes also within the system for training and filling slots for scientific personnel in the Navy. What would you recommend to cadets and officers with a scientific bent?

[Beznosov] An entire system of measures has been developed and implemented in this area. They include increasing the number of slots in postgraduate studies and the establishment of doctoral studies and the position of scientific associate at the Naval Academy and the schools.

Proposals are being worked out for introducing a system of competitive screening of candidates for postgraduate studies in the fleets, for the position of instructor at schools and of scientific associate at institutes. A special All-Union diploma as a researcher will now be presented upon completion of postgraduate studies.

In order to achieve maximum conformity of the dissertations of our specialists to the problems of organizational development, the combat training and employment of the Navy's forces and the development and operation of weapons it is planned to submit to the scientific research facilities recommended subjects for dissertation research for those competing for academic degrees.

We are working out plans for holding annual competitions for candidate and doctoral dissertation, a system for teaching research methods, professional screening for scientific work, and certain others. We hope that all of this will help us stimulate naval science and increase the results.

In this respect I would recommend to the cadets and officers to whom the creative search appeals that they proceed boldly into the field of science—and the sooner, the better. This is so that they can become doctors of sciences at least by the age of 40 and not, as is the case today, just prior to retiring at 50. Incidentally, the certification of graduates from the academy and the schools will now indicate their inclination for scientific work. The particularly gifted can be assigned immediately to perform their duty at a scientific research institution.

[Shestakov] Vyacheslav Nikolayevich, while you are chairman of the Navy's Committee for Science and Technology, you are also a member of our magazine's editorial board, which was founded and was once published as the organ of the Russian Navy's naval training committee. In your opinion, what problems of naval science warrant discussion in MORSKOY SBORNIK today?

[Beznosov] I believe that our magazine could be of great help in the establishment of conditions conducive to their resolution and to stimulating the work of the scientists. You will agree that in the minds of many of us the very concept "military science" has also been associated with something carefully concealed. However, the general reader is obviously not interested in the details of the specific subjects of research, and far from all of them are qualified to assess the importance of the subjects. The magazine could publish more frequent articles by scientists and naval specialists on common problems of scientific and informational work. Why could MORSKOY SBORNIK not tell, for example, about the lives of our prominent scientists, about the paths they have traveled in science? Or about the work of the scientific societies of cadets and students, about their outstanding works? Or about fleet and institute inventors and efficiency experts? Finally, it would be useful in the official section to provide information on the defending of dissertations and the awarding of the academic degree of doctor of sciences, academic and honorary titles, the awarding of Lenin, State and other prizes, articles on scientific conferences and seminars, and on the publication of certain theoretical military works. It would be useful to continue the regular discussions on individual, urgent problems of military theory and praxis—the theory of ship survivability, for example.

[Shestakov] In conclusion, a few words about the Navy's Committee for Science and Technology, about its missions and its prospects for the immediate future.

[Beznosov] The Navy's Committee for Science and Technology is one of the oldest independent scientific agencies not just in the Soviet Navy. It goes back to the Russian Navy. It was established as the Naval Science Committee, part of the Admiralty Department, back in 1827.

Following the revolution and civil war the committee was restructured by order of the Revolutionary Military Council of the USSR in November 1923 as an agency "directly subordinate to the higher naval command element and constituting the highest agency for science and technology of the naval department."

Today the committee is the agency through which the commander in chief of the Navy effects overall supervision of the scientific work, the training of scientific personnel, and a number of other areas. Unlike other administrative structures within the Navy's central organization, the Committee for Science and Technology functions independently of them, on the basis of collective decision-making, as a group of highly skilled experts in all the main naval specialties. It coordinates the work of all the Navy's scientific research institutions, arranges for research for scientifically substantiating prospects for the development of weapons and equipment, performs the long-range and current planning of scientific work for the Navy as a whole, the training of scientific personnel, basic and exploratory research, scientific research and experimental design work, performs assignments in the

area of expert scientific and technological appraisal, and performs many other projects.

In the future, due to the cut in defense outlays and the transition to a market economy, we are going to have to give more attention to economic and legal aspects in the planning of scientific research and experimental design work, and to achieving the optimal distribution and efficient expenditure of the funds allocated. In view of the fact that the scientific research and experimental design work is centrally financed, the Navy's Committee for Science and Technology is essentially becoming one of the important subjects of economic control and a component of the state contract system.

[Shestakov] Vyacheslav Nikolayevich, Science Day is celebrated every year in April. We salute you and all the associates of the Committee for Science and Technology and the Navy's scientific research institutions, as well as their civilian co-workers from the nation's branch, academic and VUZ science on this holiday. We wish you health and creative success.

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Kapitanets on Ship Survivability

91SV0031B Moscow MORSKOY SBORNIK in Russian
No 4, Apr 91 (Signed to press 26 Apr 91) pp 27-31

[Article by Fleet Admiral I. Kapitanets, first deputy commander in chief of the Navy, under the rubric "Cruises, Flights": "Problems of Assuring the Survivability of Ships"]

[Text] "The ship submissively tolerates all the enemy's attacks; it honorably fulfills its duty and perishes with honor. These sinkings, for which the seamen and builders answer to their conscience, are not to their honor, however."—S.O. Makarov

The findings of the government commission for investigating the circumstances of the loss of the nuclear-powered submarine Komsomolets brought up once again the question of the survivability of our ships and possibilities for the rescue and the survival of crews at sea.

There is no point in enumerating the decisions adopted by the USSR Council of Ministers, the minister of defense and the Soviet Navy. Their main content was discussed by Fleet Adm V. Chernavin, commander in chief of the Navy, in a MORSKOY SBORNIK interview (No. 12, 1990). Suffice it to say that this problem was considered for the first time not just from the standpoint of actions taken by a ship's personnel, but taking into account all the factors involved in its survivability:

- the level of development of the theory of survivability itself;
- the adequacy of its structural and technological support in the design, particularly resistance to sinking and its resistance to fires and explosions;

—the reliability of the weapons and equipment, nuclear and radiation safety;

—the quality of documents on damage control in the most likely and dangerous occurrences of flooding, fires, accidents involving weapons, power plants or aircraft on board the ships;

—the degree to which damage control is automated;

—the quality of the crew's training;

—the level of development of protective equipment for the personnel and emergency rescue support.

It should be mentioned that Western military experts performed such a study based on combat operations in the South Atlantic during the Anglo-Argentine conflict of 1982. The fact that eight ships in the British squadron were lost and 18 were damaged in combat with serious consequences was due to a considerable degree to inadequate structural support of their survivability and poor crew training. In each case of damage there were large fires, the rapid spread of which was facilitated by the presence of large quantities of flammable materials on the ships (aluminum alloys, paint, decorative plastic, linoleum-covered surfaces, cable insulation, and so forth).

On the basis of this study U.S. and NATO naval forces worked out and implemented an entire group of measures to improve the structures of the ships and the organizational and technical support of their survivability. The plans called for introducing special clothing of new and modern materials, producing heat-resistant suits and improved, self-contained gas masks and increasing the standard supply of them on the ships, as well as for introducing special, comprehensive simulators for training the crews (during the combat operations most of the officers were unable adequately to organize damage control or to direct subordinates, who turned out to be poorly prepared to operate in the difficult situation of combat damage). Considerable reductions and adjustments were made in the instructions, faith in which had been lost due to their vagueness, confused wording, low level of standardization and large volume.

The study of foreign experience and the analysis of accidents and disasters occurring with our ships have enabled us to conclude that the degree to which survivability is assured is determined in general by the state of development of science and technology in the nation, which affects the development of the theory of ships and its embodiment in the designs; the reliability of the armaments; the quality of the emergency rescue equipment and the existence of appropriate facilities for training the personnel in and directing damage control. Damage control must be regarded in the dynamic, as the interaction of fire and water and their affect upon the shipboard systems, weapons and equipment in the compartments, and on the ship as a whole.

Admiral S. Makarov's basic theory of ship survivability has existed for more than 100 years. For a long time, however, it covered primarily matters of keeping ships afloat, the theoretical principles of which were elaborated in fairly great detail prior to the Great Patriotic War in the works of Academicians A. Krylov and Yu. Shimanskiy, Professor V. Vlasov and other Soviet specialists.

Fire and blast safety and damage control with respect to weapons and equipment took shape as scientific areas at the end of the '40s, based on the war experience. They became particularly important with the development of new types of weapons and nuclear power plants and the development of aircraft carriers. It is therefore perfectly valid today to speak of the need to improve the level of scientific developments in the theory of survivability, particularly for the latest generations of large surface ships and nuclear-powered submarines.¹

Qualitative changes in shipbuilding have brought about a considerable increase in the size of the power plants, the parameters (temperature, pressure) of their operating environments, the size of storage facilities, the weight of the ammunition and supplies of organic fuel, an increase in the size of the compartments, the length of electrical cables, the quantity of electrical equipment and electronic weapons, and so forth. The ships have more structural and finishing materials whose combustion produces toxic gases. The living areas on ships contain 50 or more kilograms of these materials per square meter of deck, for example. The quantity is not being reduced on newly designed ships. Enterprises of the Ministry of Shipbuilding Industry has made very little progress in the application of fire-resistant materials, however, and there is no consistent program for adopting them. Extensive use is still being made of aluminium and magnesium alloys (AMG) as structural materials. Their strength deteriorates considerably when heated, with serious or even disastrous consequences in large fires. The problem of preventing the combustion of aircraft fuel on aircraft carriers requires special attention. This danger is exacerbated by the fact that the flash point for Soviet kerosene is +27 degrees Centigrade; that used on U.S. aircraft carriers, +64 degrees Centigrade.

Traditionally, we have tried to fit as many weapons as possible onto our ships, frequently to the detriment of survivability. For example, our surface ships ordinarily carry a larger load of ammunition than similar American ships, which requires more effective fire- and blast-protection systems for the storage facilities. Furthermore, the modern missile and torpedo weapons can greatly complicate damage control conditions in case of accidents, due to the toxicity of missile fuel components and their contamination of the compartments with gas.

Despite this, unfortunately, we still do not have a clearly defined theory of combustion in a closed space, and structural protection against fires is therefore not reliable enough. The damage control documents still do not contain instructions compiled by the designers for

fighting fires, which prevents ship commanders from thoroughly assessing the state of the compartments and forecasting the development of emergency situations and from making competent and timely decisions. We have overlooked the main point, the fact that the main factor in ship survivability is the strength, airtightness and fire-resistance of a ship's hull and compartments.

Naval specialists are in great need of scientifically substantiated calculating methods for assessing:

- the ratio of flammable and nonflammable materials on the ship as a whole and in its compartments;
- the extent of danger of an explosion in a compartment, an outbreak and spread of fire, and recommended areas for setting up defense lines;
- likely temperature fields and flows during fires in compartments, and acceptable heat conditions in them;
- the possibility and effectiveness of containing every kind of fire with reusable equipment.

A ship's survivability with extensive damage to the hull caused by fires or explosions is organically linked to its capacity for remaining afloat, which must be achieved with a reliably designed hull, as well as with watertight compartments and gastight, fireproof bulkheads. Wars and military conflicts at sea and peacetime accidents and disasters involving ships have confirmed the need to produce this kind of hulls and compartments, which would withstand the combined effects of fire, water and gas contamination. This is not an easy matter, of course, because bolstering structural safety increases the ship's displacement. The task must therefore be accomplished in a comprehensive manner, by building fireproof and self-contained areas which localize combustion on any scale, while simultaneously reducing the size and weight of weapons and equipment, adopting light, high-strength materials and using the latest scientific and technological achievements from the most diverse fields for this purpose. One of the important problems involved in assuring the ability to remain afloat is the extensive crowding together of the lower parts of machine and boiler rooms, power unit compartments and submarine compartments, which prevents the personnel from conducting an effective struggle against damage to the hull and the inner bottom plating, and which facilitates the unhampered spread of water in these areas.

It should be acknowledged that failure to appreciate the complexity and the interlinkage of the problems involved in assuring the survivability of ships was manifested most acutely in the disasters befalling the coastal antisubmarine vessel *Otvazhnyy* in 1974 and nuclear-powered submarines (1970, 1986, 1989). Unfortunately, the steps taken following them were not comprehensive, and some of them remained at the paperwork stage. In the year following the loss of the nuclear-powered submarine *Komsomolets* the Navy accumulated an adequate quantity of information on structural deficiencies

in all ship designs. A number of decisions based on this information were adopted jointly with industry, funds were allocated and implementation of the proposals was begun both on ships under construction and those already in operation. We turned our attention to the poor level of reliability of portable equipment for combatting fires and water and the inefficiency of the fixed equipment, as well as to the absence at primary control stations and power and damage control centers of modern systems for detecting water, smoke and increases in temperature in the ship compartments and areas. Appropriate efforts were undertaken by all the concerned organizations.

The new approach to the structural and technical guarantee of survivability forced us to revise documents defining the main design specifications for surface ships and submarines. Organizational steps were taken with respect to structural and technical deficiencies which could not be eliminated immediately. These included the fact that automation of the control functions of the ships, their weapons and main power plants had resulted in a significant cut in personnel (the first postwar generation of diesel submarines carried a crew of 54, while the Komsomolets had a 64-man crew, and the displacement of the latter was 5.5 times greater). The navy is presently altering the manning levels and tables and revising the watch, quarter and station bills, and new watch and alert duty instructions are being written up. We attach great importance to the development of damage control exercises on the ships, taking into account all possible emergency factors. All the regulations on this matter are being revised in the naval formations. These steps will only have an adequate effect, however, when the design organizations not only provide existing ships with new manuals on the combat employment of the equipment, but also work out draft recommendations on what the personnel are to do in the case of likely emergencies and combat damage, and primarily the most dangerous ones, those involving considerable loss of stability and reserve buoyancy. This is already being done for each ship design in the design offices with the participation of the Navy's main directorates.

The complex and multifaceted damage control process is unthinkable without automation today. Modern ships have automated systems for keeping them afloat. Reality demands that the possibilities of these systems be expanded, however. Among other things, they need to be supplemented with subsystems for indicating water and smoke, and with sensors which constantly monitor the temperature and other parameters in the compartments. Based on this data computers should issue recommended actions for the commander and crew, as well as appropriate commands to the executive agencies, in accordance with the information programed into the computer by the ship's designer. We understand that this is a large and expensive job. It has to be done, however, and two aspects of it have been started: the outfitting of ships with new computers and development of the software.

A study of accidents has shown that many of them could have been prevented if the professional training of both the officers and the personnel had fully measured up to the demands made of it today. Inadequate competence on the part of the leadership echelon and simplifications in the damage-control training frequently results in a situation in which the crew can function successfully only in one type of emergency (either flooding, a fire, or an accident with the main power plant, and so forth). They are lost in situations in which the entire range of emergency factors are at play on the ship. The training of the seamen on existing training vessels and in ship compartments allow for practicing only the very basic actions, and that only as part of a combat station crew. There are a number of facilities for the practical training of the crews of command posts (primary control stations, power and damage control centers), but they can be used only for training in maintaining buoyancy. A decision has therefore been adopted to focus on comprehensive simulators in the future, the development of which lags significantly behind the construction of series-produced ships and the delivery of new models of weapons and military equipment to the navy.

Universal, comprehensive damage control training systems have been received for building these simulators and are expected to be delivered to the fleets in the near future. They are based on personal computers and include an entire series of computerized simulators with sets of programs for training operators in all the specialties. The development of software for them is being carried out on a competitive basis and involves specialists of the Naval Academy, higher officer courses, naval schools and design organizations. We have begun the development and installation of automated systems for localizing and extinguishing fires in the early stages, using fire-extinguishing compounds which are nontoxic and nonreactive to the other equipment.

And so, one can say that today the Navy and the Ministry of Shipbuilding Industry are engaged in a process of assessing the adequacy of constructive steps being taken to assure survivability and optimize the distribution of functions between the personnel and the automated systems, precisely defining the expedient level of automatic control of the equipment for countering accidents, the number of personnel essential at the control posts and combat stations and the makeup of their crews.

A study of the circumstances surrounding the loss of the battleship Novorossiysk in Sevastopol Bay in 1955 has shown that one of the causes was the impossibility of assessing the condition of the ship, which suffered a 150-170 square-meter hole in the bottom and sustained through-and-through damage from a blast to all the decks in the bow section. Calculations showed that the only way out of the situation was to run the battleship aground and save the personnel. And so, in damage control it is crucial to be able to assess the condition of a damaged ship and adopt a decision. Following this

tragedy a new article was added to the Navy Regulations, retained in the present regulations, which requires the following:

Article 331. "The ship's commander, his second in command and the commander of the electrical and engineering division (commander of the damage control division) must:

- have a thorough knowledge of documents pertaining to the ship's capacity for remaining afloat;
- be able correctly to assess the ship's condition in the case of serious damage;
- take effective steps to assure that the ship remains afloat, that it can be navigated and controlled, and that its weapons can be employed;
- all typical cases of the most likely and most dangerous kinds of damage to the ship, resulting in a significant reduction of stability and reserve buoyancy, must be learned in advance by the ship's commander, his second in command and command personnel of the electrical and engineering division, and individual versions of damage control must also be practiced during the combat training."

Unfortunately, as shown by last year's inspections, these requirements are not being fully met on many ships, and so the causes of the loss of the battleship and its personnel have been consigned to oblivion. It was therefore recommended in all the formations that the list and sequence of actions to be taken be worked out again for all the most likely and most dangerous kinds of damage to ships, this time taking into account the comprehensive action of fire, water, ammunition explosions and emergency situations with the main power plant.

The combat training, the combat duty and the day-to-day functioning of the Navy do not allow for breaks. Only the earliest possible adoption of the new developments designed to improve the ship designs, enhance the reliability of the weapons and equipment, outfit them with modern diagnostic equipment, increase the capabilities of the systems for countering accidents and the protective equipment for the personnel, along with mastering all methods of preventing accidents and performing damage control will relieve the tension caused by the loss of the nuclear-powered submarine *Komsomolets*. In this brief article the author has only indicated the main problems pertaining to the survivability of modern ships. It is obvious that their successful resolution will require a joint effort by specialists of the Navy, industry, branch and academic science. I believe that they will take an active part in a more detailed discussion of each separate problem, including a discussion in *MORSKOY SBORNIK*.

Footnotes

1. *MORSKOY SBORNIK*, No 9, 1990, PP 61-63.

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Personnel Problems on Kuznetsov Aircraft-Carrying Cruiser

91UM0816A Moscow *KRASNAYA ZVEZDA* in Russian
2 Aug 91 First Edition p 2

[Article by Captain-Lieutenant V. Grinkevich and Senior Lieutenant M. Sevastyanov: "Between Two Fleets: Latest Cruiser Experiencing Difficulties"; first paragraph is *KRASNAYA ZVEZDA* introduction]

[Text] The problems encountered aboard this heavy aircraft-carrying cruiser in it becoming part of the fleet and the difficulties faced by the crew in its professional development were reported by *KRASNAYA ZVEZDA* as early as when the ship was known as the *Tbilisi*. Much time has passed since then, but the problems are still afloat, to use navy language. In the opinion of our unofficial correspondents, Captain-Lieutenant V. Grinkevich and Senior Lieutenant M. Sevastyanov, this is due to the fact that, strange as it may seem, the *TAKR* [heavy aircraft-carrying cruiser] still has no actual sponsor.

What is on the minds of the men of the Kuznetsov the most? Each man of course does have his own dreams, something that is for personal use only, so to speak. But one dream is shared by all: for the near future to bring the ship a dock she could call her own. Such a dock is nearing completion, but until connections are made to it, it may as well be said that there is none. As for as when this will come about, that is something no one can say for certain, not even representatives of the Northern Fleet, for which the cruiser is intended. In general, the cruiser will be accepted for service in the Northern Fleet only when all the aircraft specially built for her are in hangars with full-strength flight crews available.

The Admiral of the Soviet Union Fleet Kuznetsov is obviously a source of problems for the Black Sea Fleet, also. It was known from the very beginning that she was not being built for it. Although state concerns are supposed to take priority over everything else, narrowmindedness with respect to "someone else's" ships unfortunately cannot be eradicated. Hence the indifference on the part of Black Sea services relative to the aircraft-carrying cruiser.

Take the problem of shore liberty for officers and warrant officers, for example. The cruiser on arriving at Sevastopol is anchored at an outer roadstead. This means that it is necessary to employ some means to go ashore. It helps here that with representatives of industry still working aboard the Kuznetsov, the *Nikolayev* used for towing and associated pontoon float are always tied to the cruiser. However, as soon as the industry people depart, there will be no way to go ashore. To be sure, the Kuznetsov does carry watercraft—a launch and a longboat—but no one dares use these craft if there is any appreciable sea turbulence.

Therefore, until the Kuznetsov can be tied to a dock, it would be necessary to make regular trips from ship to

shore and back. However, the Black Sea Fleet commander has not granted the auxiliary ship unit commander permission to make such an arrangement.

This problem of shore visits brings on a multitude of other problems that are even more pressing. In the absence of transportation to shore, officers and warrant officers can do nothing about looking for whatever housing may be available so that they can bring their families. How easy can it be, living separately: husbands aboard ship, wives and children in towns and villages located all over the country.

The situation is especially difficult in the case of conscripts. When the cruiser is anchored at the Sevastopol outer roadstead, it often happens that seamen and petty officers keep pestering their commanders with requests to be taken on a trip so that they can see the city's sights. Nothing of the sort! It is unbelievable, but true: Foreign seamen from ships visiting Sevastopol enjoy the services of lines of buses with interpreter guides waiting for them at the docks. For our own boys of the Kuznetsov, this is out of the question.

The cause here is not limited to inertia on the part of the ship's officers. It is impossible to "squeeze out" permission or come up with buses, due to all kinds of obstacles set up by the fleet's shore services, which are not interested in "someone else's" ship.

Indeed. No one aboard the Kuznetsov can recall a single instance when an officer or warrant officer was offered a travel and accommodation warrant to a health resort. None of them has even been offered a travel and accommodation warrant to a pioneer camp for his kids. Why should he get one? No one makes any arrangements for families.

The question of housing is hardly ever mentioned. The reason given here is that "they have two five-story buildings waiting for them up north." Waiting, indeed. When will they be able to move in? On top of that, why send a family up north if no one knows when he will join his family there?

No wonder there is a growing number of officers and warrant officers who wish to transfer from the cruiser to shore duty, to duty aboard some other ship, or even obtain a discharge from the Armed Forces.

Captain 2nd Rank N. Ivanov, ship's deputy commander for military political work, joked bitterly on this score: "If I were to announce over the public address system, 'Anyone who wants a transfer or discharge—submit applications to me!', in one minute the door of my cabin would be knocked off its hinges."

Jokes aside, the situation is quite serious. Dozens of the cruiser's officers and warrant officers have already filled out applications requesting discharge into the reserve or transfer to another ship or to shore duty. Eight CPSU members have given up their party cards in the hope that this will speed up handling of their request for discharge.

For some officers and warrant officers, it is a case of serious troubles at home, which also compels them to think about leaving the cruiser. In addition, most of the cruiser's officers lack shipboard experience; more than half graduated from service schools in the period 1988 - 1990. Service previous to the cruiser for many of them was limited to shore duty. (This is especially true of the flight control group and aviation command department.) Thus, there is a reason why in the fleet the Kuznetsov is referred to as the "ship of lieutenants."

The cruiser is presently 114 warrant officers under strength. Nonetheless, the ship continues to successfully accomplish her missions. But at what price? The duties associated with the vacant slots have been heaped onto the shoulders of others. This makes for a double and triple burden. In this connection, there is no money to pay for these super-efforts. The cruiser cannot provide material incentive to all who deserve it. The least that could be done would be to help them acquire scarce goods, such as cars, refrigerators, washing machines. The Northern Fleet is in no position to assist in this. Perhaps this justifies setting up a special arrangement directly with Moscow. This is something that should be considered, for the future of this unique ship depends to a great extent upon our ability to retain experienced officers and warrant officers aboard her.

Forceful measures must also be adopted to improve the manpower situation. To date, 11 seamen from the Kuznetsov have been court-martialed; eight are being sought in a union-wide manhunt. While the ship is temporarily assigned to the Black Sea Fleet, all crimes and misdemeanors committed are counted against this fleet. It is possible that, if the Northern Fleet were held responsible for this, the latter would be more careful in manpower selection, furnishing the best qualified or those declared redundant aboard other ships. It cannot be said that nothing is being done about the so-called negative phenomena occurring aboard the cruiser. In this connection, it has been decided to bring aboard a new guard and security subunit, which would be a permanent part of the crew. It would consist of naval infantrymen who would be employed to maintain order aboard ship, among other duties.

All of the above does not mean that the Kuznetsov is manned solely by undesirables. The situation is problematic, but the cruiser is very much a capable combatant. Flight testing has been completed. State testing involved a total of 590 takeoffs and landings on the ship's deck, with more than 100 Su-27 and MiG-29 aircraft. The state testing program was completed in the amount of 90 percent. Other tasks are being successfully accomplished.

Nonetheless, it is felt that the cruiser was not taken into consideration in the planning of the highly promising contract service experiment in progress in the fleet. This ship is the largest in the Navy. In number of personnel assigned, it ranks with other large units to be manned by contract arrangement. Where else to conduct an experiment but aboard the new ship, the firstling of a new type

of aircraft-carrying craft? Incidentally, the possibility of correcting the omission is not excluded. If the Admiral of the Soviet Union Fleet Kuznetsov is included in the contract system experiment, it will then be possible to speak more seriously of experienced specialists competing for officer and warrant officer slots. Contract service will not rid the cruiser of all problems, of course, but it will impart some professionalism to the crew and make it possible to prevent extreme occurrences of "shipboard fever."

"A great ship asks for deep waters," goes the navy saying. That may be true, but before the heavy aircraft-carrying Admiral of the Soviet Union Fleet Kuznetsov sets out on a major cruise, it should be rid of the large and small problems that encumber the crew's living and serving.

Black Sea Fleet's Combat Readiness Said Impaired

91UM0828A Moscow KRASNAYA ZVEZDA in Russian 9 Aug 91 First edition p 2

[Article by Captain 3rd Rank Yu. Gladkevich, KRASNAYA ZVEZDA correspondent, under the rubric "The Fleet on Long Cruises": "A Squadron or a Potemkin Village?"]

[Text] We were not alone at the anchorage. The Azov was anchored there, and not far from it the Krasnyy Kavkaz, several other combat ships and auxiliary vessels.

"A real force, isn't it?" I said to one of the officers smoking on the poop, with a nod toward the ships.

"What kind of force?" the latter said with a contemptuous wave of the hand. "If the enemy wanted, he could sink the entire armada in no time at all. It's a 'Potemkin village.'"

I will admit that under other circumstances I would have considered that contemptuous remark about the squadron operating in the Mediterranean Sea to have been a casual and completely inoffensive comment. Who knows what any of us is likely to blurt out before thinking? The problem was that I had heard things like this before, however. While on a long cruise in the Mediterranean last year, and even on this one, I have more than once heard an officer or warrant officer refer to the squadron as a "Potemkin village."

In recent years the combat readiness, and the health of our army as a whole, has evoked considerable concern. Like it or not, the cut in the military budget has complicated the job of maintaining the units and the ships at a high level of combat readiness and added to the difficulties involved in implementing certain defense programs and conducting scientific research and experimental design work to benefit the army and navy. It is painful but—there is no denying it—obvious that the nation, weakened organizationally and economically, is indeed unable to see these programs through.... Add to this those extremely massive attacks which have been and continue to be made on the Armed Forces by proponents of the

"total democratization" of our homeland. They certainly do not promote the strengthening of our defense structures. There has been, and, despite everything, there continues to be the hope that the personnel of the army and navy—both regular and rotating—will demonstrate steadfastness and stamina at this difficult time and a readiness to maintain in any situation that morale and confidence in their own capabilities which are traditional for our Armed Forces.

Unfortunately, it appears that the destructive germ of lack of trust in oneself has penetrated our ranks. The remarks I mentioned at the beginning of the article can probably not be regarded as feelings of panic in the pure sense. They are, however, extremely symptomatic.

I talked with the officers and tried to determine whether they had an idea of the squadron's actual strength and the role it plays in the Mediterranean area. Unfortunately, not all of them do. This accounts for both the attitude which was discussed and the references to an alleged low level of readiness of the ships.

"All of this stems from a certain limitedness of the view from this or that combat station," believes Rear Adm A. Aladkin, chief of the Technical Directorate of the Black Sea Fleet. "Objective data show that our ships preserve that level of technical readiness essential for executing missions in a combat situation even on long cruises, separated from their bases, practically without port calls and frequently in heavy seas. Yes, things are difficult for us. Not just the Black Sea Fleet but also the Navy in general have many problems with the so-called floating rear service, the ships and vessels which have to provide for the timely repair of the combat ships at sea. We therefore prepare the ships all the more thoroughly for going to sea. The fleet's technical directorate takes each ship under its wing more than two months before a cruise. And we spare nothing—neither our time (we work without days-off when necessary), nor monetary outlays nor spare parts. By the beginning of a cruise, however, every ship is a full 100% ready."

According to Rear Admiral Aladkin, this has become more and more difficult of late, to be sure. The wave of reductions moving through the Armed Forces has now reached the fleet's technical directorate. And these reductions cannot always be called appropriate or well conceived. How can one consider well conceived, for example, a reduction in the positions of officer/specialist in docking operations in the technical directorate's personnel? We know, after all, that our fleets have many ships which are "getting along in years," ships which require docking time and again....

In the meantime the functions of the fleet's technical directorate have grown, and the range of its jobs has increased. The fleet agency has taken on some of the responsibility from the central directorate, which has also been cut unmercifully. The conversion of many enterprises which operate for the fleet to direct relations and contracts requires frequent trips by officers from the

technical directorate to these enterprises. And the personnel left at the directorate can be counted on the fingers of one hand....

Nonetheless, the squadron ships are not like the props in a "Potemkin village." Take a fairly recent exercise to seek and destroy "enemy" submarines. I will frankly say that this was a difficult test for the ships. All of the engines, plants and electronic equipment operated at their peak, so to speak. As a result there was not a single breakdown of equipment or weapons, or breakage of parts...

"I feel that one is perfectly justified in saying also that the operational-tactical training of certain of the ships' officers is not good enough," Captain 1st Rank N. Cherey, an officer at the Navy's Main Staff, maintains. This is the origin of absurd assertions about a front being maintained by the Mediterranean squadron. One must take into account the fact (and every officer must know this like the Lord's Prayer) that its capabilities are not limited to the capabilities of its surface ships. In wartime their combat efforts will be bolstered by submarines, aircraft and other fleet forces, as well as other branches of the Armed Forces. Nor should it be imagined that in case of war the squadron will find itself in the position of one sentenced to death. Its survivability is assured by certain measures which will be carried out at the necessary time.

The area in which the formation operates, in the opinion of Nikolay Ivanovich, is well equipped in the operational and navigational respects. There are always support vessels present, prepared to resupply the ships. The fleet is prepared to increase these forces if the situation requires this. And the high level of professional training of the squadron's command element and officers of the seagoing staff is a guarantee of the successful accomplishment of all missions, even the most difficult.

"It would appear that the formation command element and officers of the seagoing staff should do some serious work among the crews," was the conclusion drawn by Vice Admiral V. Nekrasov, chief of the Military-Political Directorate of the Black Sea Fleet. "The men have to refresh certain specific knowledge, particularly tactics and operational art, and must be given some explanations about the squadron's role and its practical readiness to perform its missions."

Design Flaw Sinks Hover Craft in Amur River

*91SV0043A Moscow KRASNAYA ZVEZDA in Russian
14 Aug 91 First Edition p 2*

[Article by KRASNAYA ZVEZDA Correspondent Lieutenant-Colonel V. Knyazev: "Tragedy on the Amur"]

[Text] Khabarovsk is full of the most contradictory and improbable rumors. It is a question of an explosion that allegedly occurred on an Amur seamen's military vessel. Well, and the details—each in his own way.

Just what actually occurred? This is the information our correspondent received at the river ship's unit headquarters.

The Ship Building Plant imeni 60th Anniversary of the October Revolution is building an assault hover craft for the Amur seamen. On that day, the craft was conducting plant trials, a series of which are being conducted according to existing regulations prior to transferring the vessel to the Navy. A crew of plant specialists was on it carrying out the plant director's order. Several military seamen from the future crew were also on the craft and were observing the activities of the civilian specialists and accumulating experience.

Two armored personnel carriers were loaded into the assault compartment to imitate the craft's combat cargo. The nose portion of the air cushion barrier broke while covering a measured distance to adjust the recorder's operation. The craft lost speed abruptly and the nose section buried itself in the water. As a result, the forward armored personnel carriers' tie downs broke and it inflicted fatal injuries to one of the civilian workers when it moved forward.

At that time, there were four civilian workers and four seamen in the crew quarters. The hydraulic blow of the water broke the deck and instantaneously filled the crew quarters and suddenly subsided as a result of the leveling of the vessel. It dragged two people into the waters of the Amur. One of them—a civilian worker—immediately floated to the surface overboard and got off with just a slight scare but a seaman is missing and has still not been found.

Altogether as a result of the tragic accident, one man died, one is missing, and more than 10 received injuries and varying degrees of trauma.

Actually, the entire crew was in shock and was not capable of conscious action for a short period of time. Only Radio Telegraph Operator Senior Seaman Vitaliy Yatsenko, who was in the crew quarters (the water almost carried him away but someone held the seaman by grabbing his clothing at the last moment) and he immediately rushed into the radio room and reported what had occurred via radio.

Now one thing is clear: some sort of design defect caused the accident. But which enterprise of those that participated in the construction of the vessel may be specifically responsible for the accident—Ministry of the Ship Building Industry 2nd Main Administration Chief Engineer V. Tyulenev has been designated chairman of a commission of experts that is looking for the answer to that question.

And one more thing. The plant leadership, the commission members, and other officials are keeping journalists and the public in the dark for now. They say the investigation has not yet been completed and it is too early to say anything. Is this position reasonable? As soon as misfortune occurs—you can no longer hide it.

And you need to say something to the people if not about the causes (they can actually be unexplained from time to time) then if only about what actually happened. But then there is also this rumor among those circulating in the city: an explosion occurred in the vessel's nuclear reactor....

Mismanagement of Naval Research Ships

91UM0837A Moscow KRASNAYA ZVEZDA in Russian
27 Aug 91 Single edition p 4

[Article by Captain 1st Rank A. Zlydnev, Captain 3d Rank V. Maryukha: "The Ship is Laid Up"]

[Text] Among the many causes that prevent us from filling the consumer market with a variety of goods are the ineffective use of production capacities, and their low workload. Costly equipment, which can be justified only by product output, is also idle for other reasons—no raw materials, customers, or resources for development of production. Such problems, seemingly far removed from the Navy, are also familiar to naval personnel, especially to those who do not merely fulfill assigned tasks, but also in the process of their fulfillment return to the state budget a considerable amount of funds spent for the Navy.

We are not speaking about instances when money comes in pure form, such as, for example, after selling worn out ships for scrap. Within the Navy there is a rather sizable detachment of ships whose research activity, within the framework of accomplishing their own programs, can and should become a high-quality commodity on the domestic and foreign markets.

Along with our ever increasing lag behind the Western powers in level of well-being, our priorities in science are also waning, and appropriations for space and other research are being curtailed. In the fields of science that require protracted and continuous research, any slowing (not to mention complete cessation of work) jeopardizes all previous results and work in progress for the future. It is precisely this fate that threatens the work that Navy hydrographic ships have been carrying out for many years.

"There was a time when the Navy keenly felt a shortage of large oceanographic ships," Captain 1st Rank A. Bocharov, commander of the OIS [oceanographic research ship] Ivan Kruzenshtern, told one of us. Small ships with poor sea-going ability were away from their bases for 9-11 months, and worked, as we say, until they were worn out. Now we see an entirely different picture: huge, superbly equipped ships do not fetch away from the moorage wall for long periods of time. And this is in a situation in which, finally, the cadres problem has been solved. Sailors who came to us from shipping companies that were undergoing reductions are becoming firmly established in the crews (previously they were always leaving for a cruise on another ship due to a shortage of specialists there). Until recently we were still struggling to improve the equipment use factor. We succeeded in

maintaining it at mark 0.7, and sometimes brought it almost to 1.0. Now it is as though no one is concerned about this.

As an example, Aleksey Ivanovich reported on the results of one of the latest cruises. The planned time to be at sea came to an end, but another week at least was required to complete the research at a high level of quality. The commander requested the "OK" to extend the cruise, and presented all the necessary justifications. However, the shore was categorical: He was to return at the designated time.

Consequently, not only the use factor, but also the research quality, are already sacrificed to some other interests. What do they amount to?

The Navy, with its "scanty" budget, cannot handle the full complex of research problems on its own. Every excess week at sea by an oceanographic research ship represents an over-expenditure of fuel, every ton of which has long been accounted for. It also represents excess pay to the crew, and at times in hard currency. Research in the ocean is being curtailed in the chase after today's "savings." Therefore, in the expedition in which the oceanographic research ship Ivan Kruzenshtern is included, cruises are planned for the ships "from the attained level." The crew went for a month or six weeks at sea, and then was told to await its turn—a year later.

"One can understand the people," said Vice Admiral Yu. Zheglov, chief, Main Directorate of Navigation and Oceanography, USSR Ministry of Defense, in a conversation. "Not only the romance, but also the opportunity to earn money, attracts them to the ocean. At the wharf a sailor from an oceanographic research ship earns 150-200 rubles (the ships are manned mainly by civilian specialists), on which it is difficult to support a family by today's standards. But it is not only financial limits that keep our ships, which are intended for ocean voyages, at the wharves. The 'pool' of our ships, if it can be so expressed, has not been renewed for a rather long time already. Therefore it is also necessary to think about conserving engine life, and about timely repairs. And this again represents additional costs, including in currency. Of course, all of this in the aggregate affects the state of research work."

The desire of the Navy's leaders to preserve the research ships under conditions in which it is guaranteed that new structures will not be entering the Navy, is understandable. However, the reduction of appropriations for hydrographic and other work is occurring at a time when the American research fleet, for example, is, by contrast, developing more extensive oceanic study programs. Clearly the Americans are not now experiencing the difficulties that not only our Navy, but the whole country as well, are surmounting. But, while citing the difficulties, we should not forget that, understanding the sea and

the atmosphere above it, and having studied and systematized data from numerous studies, we can obtain significant advantages that will make it possible, if not to escape the crisis, then at least to reduce its gravity.

Take just the ecological problems. Many unique enterprises that pollute the environment are already closed or are on the verge of being closed. As a result the country is bearing colossal losses, and necessary goods are absent. Would not the Navy research efforts prove useful here? This is within their capabilities—to study the situation and issue recommendations on neutralizing harmful discharges into the ocean.

Numerous civilian institutes that do not have their own research ships are studying various natural phenomena. Even previously they had recourse to the services of the Navy, but under market conditions they cannot on their own pay all the costs of possibly leasing an oceanographic ship. Why do not the hydrographers themselves begin to seek customers, who, in a cooperative effort, could invest money into leasing a ship for conducting research? Such a service could also be proposed for the foreign market—far from all countries possess a powerful research fleet. This is all the more so in that Navy personnel already have some experience in this regard. The naval maps of military hydrographers, for example, enjoy stable demand in the world market.

"The idea of leasing and freight is an attractive one, of course," says Vice Admiral Yu. Zheglov. "But, in solving our specific tasks we are still careful to fulfill only one-time requests for transporting various types of cargo. This, of course, is not on that scale."

In general, under market conditions, Navy hydrographers have many opportunities, which promise, if not immediate profit, then at least to pay for themselves. If it is taken into account that today many scientists in various countries throughout the world see the prospects for the development of human civilization in assimilating the continental shelves, then one can be sure that the researchers will not remain long without work. It is just necessary not to await the weather at sea (in other words, managerial directives), but to display initiative ourselves.

Black Sea Commander Says Not Involved in Coup

*LD0409123291 Kiev Radio Kiev in English 0000 GMT
4 Sep 91*

[Text] The commander of the Black Sea naval fleet Admiral Khronopulo sent a message to the chairman of Ukraine's Supreme Soviet in which he declared that the Black Sea naval forces were not involved in the abortive coup d'etat.

Arbatov Views Coup, Urges Army Reform

91UM0843C Moscow ARGUMENTY I FAKTY
in Russian No 34, Aug 91 p 5

[Interview with Academician G. Arbatov, people's deputy of the USSR, by unidentified correspondent; place and date not given: "The Nuclear Button in the Hands of Rogues"]

[Text]

[ARGUMENTY I FAKTY] Georgiy Aleksandrovich, you are one of the few politicians who has locked horns with such a monster as the military-industrial complex and all generals simultaneously. You have been hounded for this, your life has not been easy. What do you feel now?

[Arbatov] I am pleased, of course, that I had sufficient fortitude, although, to be honest, it was inwardly difficult. My wife and I were threatened, the lot. But now I am upset primarily by the fact that my voice was not heeded. How many times had I personally told Gorbachev about Varennikov, about all these monsters! I also warned him about Kryuchkov, whom I had known from the Central Committee, where we worked together under Andropov in the 1960's. A month ago, together with Ryzhov, Petrakov, Shatalin, Yablokov, and others, I appealed on the basis of material of Yuriy Shchek-ochikhin for the adoption of measures to avert a coup, but nothing was done! Everything pointed to a conspiracy, and many people saw it, but not the president of the USSR.

Look, we are talking about perestroika, and at the same time tanks in the streets of cities in peacetime had become a customary sight. Never has there been such a thing! Troops had been committed to Moscow alone three times in the past year. We had never had special forces and the Special Militia Department, they emerged in the years of perestroika! Against whom do they operate? Against organized crime? Nothing of the sort! There is no less of this. They are pacifying the people.

I would like to specify that I am for Gorbachev remaining president today. But I have to mention his great responsibility and blame even for what has happened. M. Gorbachev arrogated to himself more and more special rights. Why? For them subsequently to be snatched away by rogues like Yanayev?

For three days a nuclear power was in the hands of rogues, adventurers, and criminals.

And the president's ukases, the patrolling of the streets? The president's Minsk speech about the "so-called democrats"? And Kravchenko? And the support for Ryzhkov at the elections?

There is much that is incomprehensible, and those January events in Lithuania. And the articles of Prosecutor General Trubin on the events in Novochoerkassk and Lithuania?

I am uneasy about the military also. I saw Lobov (appointed chief of the General Staff) in the Foreign Affairs Committee. I know that this man is deep down in sympathy with the conspirators, on questions of policy, in any event. He cannot, I believe, occupy this position. I believe that not a military man, not a general, but a civilian should be minister of defense. Shaposhnikov, the new defense minister, spoke recently of the horror of his position during the putsch, when he decided to support Yeltsin and was looking for military men to rely on. On the second day he had found only one—Grachev. And this out of dozens of generals!

Radical reform of the army is needed. It is essential that it be put under strict political control. An entirely different committee for defense and state security is needed.

During these grim days we had not an external enemy (the Western countries, with which people had continually been intimidated) but an internal enemy—in the shape of the conspirators and the leadership of the Army, the KGB, and the police. But the Americans supported us. A lesson should be learned from this. We cannot live without the armed forces, of course, but it is essential that they be brought into line and made a loyal instrument of the political authorities.

[ARGUMENTY I FAKTY] Do you consider it necessary to decisively reduce the size of the Army?

[Arbatov] Yes, radically. After October 1917 and after the civil war we were, truly, surrounded by enemies, but even then our Army was no greater than 500,000 men. But there are now approximately five million men under arms, and the country cannot support them. There are in Moscow alone more generals and admirals than in the whole of the armed forces of the United States.

[ARGUMENTY I FAKTY] Were you to be offered some high office, would you accept it?

[Arbatov] I am getting old for important positions, but am prepared to help as far as I am able.

Progress of Housing Construction in Volga-Ural MD
91UM0817A Moscow KRASNAYA ZVEZDA in Russian
2 Aug 91 First Edition p 2

[Article by Lieutenant Colonel O. Bedula: "Housing a Priority"]

[Text] The steppe post is one of those posts receiving units that have been withdrawn from the Western Group of Forces. Everyone here is in a hustle and bustle helping officers' and warrant officers' families settle in and resolve the hundreds of problems associated with people's lives in a new place.

Housing is a cause of concern to everyone, of course. In that regard, this post has been successful in making housing immediately available to incoming families of officers and warrant officers. New 90 unit- and 48 unit-apartment buildings await them; they merely pick up their key and move in.

Under construction are 72-unit and 48-unit apartment buildings and comfortable modular cottages for those who will report at a later date. I spent some time watching the housing being built. The work continues day and night without interruption. Soldiers from post units have been detailed to help the builders maintain a high rate of progress.

"We assigned construction a high priority," said Colonel V. Balaban, chief of the large unit military-political section. "We temporarily halted all other construction and put off major repair of service buildings. By the beginning of August, all families needing housing will be provided with well-built apartments."

[Bedula] What is being done about other problems of an everyday nature?

[Balaban] "In this case, things are not getting along as well. There is only one school on post. We have already started to erect a second one, of 860 pupil capacity, but the pupils will have to start off their school year under crowded conditions. This is where the rayon authorities could assist, of course, but they have done nothing more than talk and make promises.

"The kindergarten is in the same kind of situation. Being the only one on post, it is as packed as it can be; there is no money for another one. It is true that the Orenburg Garment Association has promised to help the kids, but only after a children's clothing sewing shop opens on post.

"I must say that the problem of trying to find employment for the wives of officers and warrant officers is one of the most pressing. However, even in this case the situation is not hopeless. The hospital and commissary are being enlarged; we are looking forward to construction of a shopping center and cultural and communal facilities. In addition, the rayon authorities have promised to find employment for many specialists."

I asked about the problem of availability of grocery items for incoming families.

"We have resolved that problem completely," said Colonel A. Kosyakov, the post commander. "We are now enjoying larger deliveries of all food supplies. On top of that, we have solid patronage arrangements with neighboring kolkhozes and military sovkhozes. The officers' mess hall is operating in two shifts. We have opened another mess hall and enlarged the light food bar."

Everyone with whom I spoke had no complaints about the social aspects of the installation; they realize that the difficulties are temporary. However, the post authorities do complain about the new arrivals, who still do not consider the post as their home, even though they have been here for some time. They are less than willing to maintain order and cleanliness; some of them are negligent in their handling of state property. Everyone must realize that the post must do everything using its own resources.

Construction Troops Plan Fulfillment Through June 1991

91UM0821A Moscow KRASNAYA ZVEZDA in Russian
6 Aug 91 First Edition p 2

[Unattributed article: "Construction Troops: Results of Six Months]

[Text] Results of the work of construction troops in the first six months of 1991 have been totaled by the Ministry of Defense. It has been noted that the state plan for capital construction was fulfilled with respect to implementation of productive capacity, facilities, buildings and structures at a rate of 110%, with respect to use of total residential space at a rate of 102.5%, and with respect to amount of construction-installation work projects at a rate of 100.4%.

Residences with total area of more than 1.1 million square meters, 140 facilities for social, cultural and welfare purposes were constructed and placed in service. For the families of servicemen who have arrived from the countries of Eastern Europe 95 residential buildings with 4,272 apartments and 36 dormitories with 2,516 rooms have been placed in service. Seven buildings with 326 rooms were refurbished as dormitory facilities.

The best results have been achieved in these six months by collectives of construction crews of the Zabaykal Military District, the Northern Fleet, organizations headed by T. Ksenzov, V. Krivko, F. Kapura, L. Lapshin, G. Synkov, V. Tukshumskiy, and the enterprises where the directors are V. Boyarun, Ye. Dmitriyev, V. Grishchenko, V. Kasimtsev, V. Kazachkovskiy, and I. Petrov.

Builders of the Moscow, Baltic, and Kiev Military Districts, Pacific Ocean and Baltic Fleets, and the organizations where the leaders are I. Dolgikh, V. Lyodt, V.

Petrishchev, V. Rezhets, V. Yashchenko and others, enterprises of the construction industry, which are directed by E. Babkin, L. Vayman, P. Grigoryev, G. Miroshnikov, N. Pustovoychenko, Ye. Stepkin, and Ye. Shumayev successfully fulfilled their plans with respect to the basic production and economic indicators.

Among the apartment management organizations and enterprises the best results have been achieved by the collectives which are headed by M. Burenkov, Yu. Zhegin, L. Marchenko, and V. Ponomarev. At the same time a number of military construction organizations have lagged behind with respect to separate capital construction plan indicators. This includes the construction directorate of the Carpathian Military District, organizations which are directed by N. Dzhera, I. Isanin, V. Komov, V. Mikhaylov, V. Soborov, and A. Chernyshov. The organizations which are headed by V. Bursak, G. Filippov, and some others did not place residential facilities in service.

The main causes of non-fulfillment of the plan for building construction were serious deficiencies in the organization of production and material and technical support of construction, low quality of construction-installation projects, and slow re-equipping of construction industry enterprises. Gross infractions of safety

rules and worker safety have not been eradicated at many construction sites. The personal injury level has not decreased.

Finland To Build Housing for Soviet Military

*OW0609011691 Moscow INTERFAX in English
2102 GMT 5 Sep 91*

[Following item transmitted via KYODO]

[Text] Two Finnish companies—Puolimatka International and Hakka—will build residential communities in the USSR for Soviet troops that are being withdrawn from eastern Germany.

According to the \$100 [as received] contract that was signed this week, the communities are to be located near Minsk in Belorussia and in central Russia's Kaluga region. Each will include a 1000-apartment residential complex, a hotel, a department store, a school, a swimming pool, and day-care centre.

The communities are to be completed by the end of 1992. Also taking part in the construction work will be a Soviet company and a Turkish firm.

General Staff-Uzbek Agreement On Military Service

91SV0045A Tashkent PRAVDA VOSTOKA in Russian
7 May 91 p 2

[Report by UZTAG: "Agreement Signed"]

[Text] In accordance with the Uzbek SSR President's decree "On Measures to Improve the Conscription and Performance of Military Service by the Republic's Young People," an important document has been signed—an agreement between the USSR Armed Forces General Staff and the Uzbek SSR government on improving the conscription and performance of active compulsory military service by Uzbek SSR citizens.

The agreement was signed by G.F. Krivosheyev, deputy chief of the General Staff of the country's Armed Forces, and I.Kh. Dzhurabekov, first deputy chairman of the Cabinet of Ministers under the Uzbek SSR President.

The chief aim of the agreement is to provide social protection for servicemen who are citizens of the Uzbek SSR as a sovereign state and members of their families.

In drafting the agreement, the two sides were guided by the requirements of Article 5, on the demarcation of powers in the USSR, of the draft treaty of union of sovereign states. They took into account the importance of close cooperation in resolving military issues that come under the joint competence of the USSR and the republics that are members of the Union. The joint exercise by the USSR and the republics of authority with respect to establishing procedures uniform throughout the country to govern the conscription and performance of military service is a firm foundation on which to build a single interethnic USSR army whose manpower is acquired in accordance with the principle of extraterritoriality.

Therefore, conscripting Uzbek SSR citizens for active military service, sending them to other regions of the country to perform their military service, and keeping them within the Turkestan Military District and the Uzbek SSR are to be carried out strictly within the framework of the concluded agreement, with due regard to the principle of extraterritorial acquisition of manpower for the USSR Armed Forces.

The agreement stipulates several special provisions with respect to organizing the conscription of Uzbek SSR citizens for active military service. The sides deemed it necessary to observe the principle of social justice and the requirements of laws and legislative acts on universal military service and on procedures governing the conscription and performance of active military service by USSR citizens.

It is deemed necessary to annually review the conscription volume in conjunction with representatives of the USSR Ministry of Defense and duly appointed representatives of the Uzbek government.

A basic principle guiding this work is the inadmissibility of conscripting for active military service youths and draftees in poor health. In this regard, it is essential to observe the statute on medical examinations in the USSR Armed Forces that was drawn up by the USSR Ministry of Defense, the USSR Ministry of Health, and the Uzbek SSR Ministry of Health, in conjunction with the country's leading medical research institutions.

A citizen subject to conscription who has a brother who was killed or who died while performing compulsory military service is exempted from conscription for compulsory military service in peacetime. Only one brother in any given family is exempted, with the choice to be made by the parents. Draftees who have the right to exemption on these grounds do not have to exercise this right.

The agreement establishes certain special provisions regarding the performance of active military service by citizens conscripted from the Uzbek SSR. For example, when possible, conscripts from Uzbekistan who are legally married will be sent to units and large units stationed within the borders of the Turkestan Military District and as close as possible to the family's place of permanent residence.

Youths called up from Uzbekistan will not be sent to serve in the Transcaucasus Military District or in the Caspian Flotilla, or in elements of the Black Sea Fleet stationed on the territory of the Transcaucasus Military District. An exception will be made for persons who express a desire to serve in these areas voluntarily.

Measures are to be taken to expand the instruction in training units of cadets who are conscripts from the indigenous nationalities of the Uzbek Republic. In order to enhance the quality and objectivity of noncompetitive admissions of youths of Uzbek nationality to military educational institutions of the Ministry of Defense, the government of Uzbekistan will appoint representatives of local government bodies and public organizations to a republic admissions commission to be set up each year. For its part, the General Staff undertakes to make effective efforts in the Uzbek SSR to select candidates from among youths of the indigenous nationality and to admit them to military educational institutions of the Ministry of Defense. It is guaranteed that youths of Uzbek nationality will be admitted on a noncompetitive basis to military educational institutions of all branches of the Armed Forces, within the limits of established quotas. Up to 1,000 youths are to be so admitted in 1991.

The possibility of having representatives of examination commissions of schools on the territory of Uzbekistan accept examinations from secondary school graduates from the Uzbek SSR who are admitted to higher educational institutions of the Ministry of Defense on a regular basis will be considered.

The sides agree that citizens of the Uzbek SSR conscripted for active military service in military construction detachments are to serve only in said subunits stationed on the territory of Uzbekistan.

The agreement sets forth the responsibilities of the USSR Armed Forces General Staff in ensuring the legal and social protection of conscripts, compulsory-duty servicemen, and members of their families. For example, in the course of holding regular conscriptions, the General Staff must ensure the observance of military discipline by all personnel at assembly and reception centers, stations, and airports, and throughout all railway or air travel. It is to assign officers from military units and from military commissariats, as well as representatives of public organizations, who are capable of ensuring proper compliance with regulations throughout all travel to escort groups of young recruits and trains carrying them.

It is important that henceforth, the military political agency will be required to send a letter to the parents of each serviceman conscripted from the republic who arrives at its unit and to inform them of his arrival, of the given name, patronymic, and surname of the commander, and of the location where their son is serving.

The General Staff will continue to make constant and persistent efforts to guarantee the security and social protection of compulsory-duty servicemen and members of their families and to provide social security benefits and insurance to them.

Stricter demands will be made with respect to eradicating hazing, the formation of groups based on ethnic affiliation, and other negative phenomena in the army and navy, strengthening military discipline and law and order, instilling an internationalist spirit in soldiers, and maintaining a healthy psychological climate in troop collectives.

For its part, the government of Uzbekistan undertakes to prepare republic citizens for active military service and to ensure the implementation of conscription. Thus, the government undertakes to ensure the conscription of republic citizens within the agreed-upon volumes and established deadlines.

Necessary measures will also be taken to enable representatives of public organizations to escort military units of discharged servicemen to their places of permanent residence or to centers on which agreement has been reached with formations of the Armed Forces branches and local bodies of republic military administration.

The agreement sets forth certain special provisions governing the formation and functioning of extramilitary service units on the territory of Uzbekistan. It is acknowledged that in peacetime, making determinations as to the disposition of conscripts found unfit for active military service on the basis of medical parameters will fall under the exclusive competence of the Uzbek SSR government.

On signing the agreement, the republic government registered a special opinion. The government deems it expedient that the Cabinet of Ministers under the Uzbek SSR President and the Armed Forces General Staff annually review and reach agreement on the conscription contingent. This will be based on a percentage normative of the number of republic citizens performing active military service, with the normative to be determined from the average union ratio of the total strength of the USSR Armed Forces to the total size of the country's population. Should the size of the conscription contingent exceed the established average union normative, compensation is to be provided, whose forms, amounts, and procedures will be spelled out in protocols.

The agreement took effect as of its signing.

Kiev MD Faces Officer Shortage as 200 Seek Early Retirement

*PM2808100991 Moscow KOMSOMOLSKAYA
PRAVDA in Russian 16 Aug 91 p 1*

[Untitled report from TASS, INTERFAX, SIBIFORM, URAL-AKTSEPT roundup under "Did You Hear? Did You Read?" rubric]

[Text] A crisis situation has arisen in the Kiev Military District in connection with the officer cadre complement. Over the past six months more than 200 officers here have tendered applications for early retirement from the USSR Armed Forces.

Gareyev Responds to Publication of Historical Commission Transcript

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[Article by Doctor of Military Sciences Army General M. Gareyev: "The Truth About the War Cannot Be Given or Received. It Must Be Sought Together"]

[Text] The newspaper NEZAVISIMAYA GAZETA [NG] on June 18 published a so-called "shorthand record" of a session of the Chief Editorial Commission (GRK) with a discussion of the first volume of the work "The Great Patriotic War of the Soviet People." The nature of that feature, the way in which it was presented, clearly show the aim with which it was done. That aim, of course, in accordance with the well-known stance of that newspaper, is to discredit those who criticized the manuscript of the first volume of the aforementioned work, and to portray some of the authors of the manuscript—who had actually allowed serious drawbacks in the development of the manuscript—as blamelessly stricken "heroes" of the day. In any case, no attempts at scholarly discussion or more profound grasp of the historical truth can as yet be discerned from that or a number of other features on this issue that have appeared recently.

Why are such presumptions and conclusions arising?

First of all, the very fact of the publication in a newspaper of materials from an ordinary working session of the GRK (not the Ministry of Defense [MO], by the way, as was stated in NG, but rather a commission comprised of representatives of the MO and other organizations as well, including a number of institutes of the USSR Academy of Sciences) compels one to think about this. I think that impartial discussions sometimes take place at editorial councils or newspaper meetings. But all of the participants in those meetings are naturally counting on the fact that it is an internal, working discussion. And no one assumes, of course, that the materials of a discussion that took place will be published by someone in distorted form and in subjective interpretation without the consent or notification of the other participants.

Indignation is resounding, on the one hand, on the score of public criticism of a manuscript that is as yet "unknown to the overwhelming number of both historians and military people" while, on the other hand, features are moving forward at full bore, and not only in the publications mentioned by Vit. Tretyakov, but also in NEZAVISIMAYA GAZETA, KOMSOMOLSKAYA PRAVDA (22 Jun 91), ROSSIYSKIYE VESTI (No. 6, June 1991) and other media. Just why is this being done if the reader still really does not know concretely what is being discussed?

Starting with the headlines in NG ("The Generals Determine What the Soviet People Should Know About the Great Patriotic War...", "The Generals and History") and the tone of address of the editor-in-chief of the

newspaper, and ending with the photographs of the military chiefs that are included (some of whom asked just one or two questions in the course of the discussion), everything is permeated with preconceptions and, to put it mildly, ill will. The right of the Chief Editorial Commission to discuss a manuscript of the work (just why, then, was it created?) and any opportunity of generals participating in its consideration is essentially being called into question. An exception was made for just one general—D.A. Volkogonov. And a group of historians in IZVESTIYA (19 Nov 90) declared without ceremony that generals should not be permitted to write military history at all.

There are different people among generals, as there are among the representatives of any profession. A.I. Herzen noted that "nothing in the world can be more restrictive and inhuman than wholesale condemnations of entire estates—according to superstition, moral catalogue, according to the chief nature of the shop... I have an aversion to people who are not able, or do not want, to take the trouble to go further than names..."

There is nothing more repulsive than when something similar happens today in relation to the name of "general," and all generals are subjected to spiteful wholesale attacks on each contrived score, and even without them. Everything they say is called into question in advance. All of this is the same as if someone, for example, began to assert that once you are a journalist, you are knowingly unjust.

Clearly, every general is not able to become a good historian. He may nonetheless be a more competent judge in principle of the military aspects of historical problems from the heights of contemporary military knowledge, and therefore, as a rule, the professional can better investigate this realm than a person who has no special military training. No one would take it into their heads to deny physicists, biologists or mathematicians the right to be occupied with the history of their branch of science. Military science and military history also have scholarly foundations, and their competent consideration demands a certain military, as well as political and philosophical, knowledge. One must not forget that many of the disasters of 1941 were engendered namely by incompetent interference by self-confident and ignorant people into military matters. That is what they are trying to repeat today.

As for the essence of the matter, remarks and suggestions were made during the course of the GRK session on a number of specific issues as well. They were talking about both positive and negative aspects of the manuscript. The head of the editorial staff for the 10-volume work, Col R.A. Savushkin, also discussed serious drawbacks with the members of the GRK. He also acknowledged that the first chapter of this work, "being non-objective and tendentious," "...has received the poorest evaluation by the chief of the institute," D.A. Volkogonov. Most of the authors of the manuscript later agreed to a number of the observations that were made,

and are now working persistently on a revision of the first volume with, it seems to me, inner conviction.

Like some other participants in the session of the GRK, I was not in agreement with all of the remarks and statements. I did not, and do not, share the approach of some of my colleagues in their presentations and replies, limited to attacks of a personal nature instead of a discussion of the subject matter and specific questions, instead of proof and reasoning. Certain people with some relation to the writing of this work, on the other hand, remain stubborn and do not feel it necessary to answer even well-founded observations or to dispute them in some sort of reasoned fashion, and in their multitude of presentations engaged principally in all sorts of accusations directed toward those who had dared to criticize them.

Support for them on the part of the editors of some newspapers is creating conditions wherein any author can cover up his scholarly bankruptcy with political demagoguery, thereby protecting himself from any criticism or academic exactingness. All of this has already happened at one time, when even the most middling works, stuffed with the requisite ideological phraseology, received support. Historical science has suffered enormous harm from this.

T. Doronina was recently talking in a television interview about the onerous situation in some theatrical circles, where any artist or person is nobody if he does not belong to a certain clique and does not support it in everything. And she is right. One need only support the stance of this or that group or editorial board, and a person not known to anyone before that immediately becomes prominent, even though it is not hard to understand to what humiliating position such a person has sunk. The press is creating something similar in the realm of history.

Second, I cannot fail to note that the "shorthand record" of the GRK session published in NG does not reflect what was actually there. Even though it is stated that the document is being published "in minimally abridged form," the places in many presentations that comprised their basic essence were artificially removed. I did not recognize, in particular, my own presentation at all, the text of which I had prepared in advance and handed over to the secretariat of the GRK that same day.

Please think at least about this theme ascribed to me: "...All of the arbitrariness and repressions in the army are reduced to Stalin, but they were started by Tukhachevskiy, after all..." But how could a normal person say such a thing? What repressions could Tukhachevskiy have implemented, and how? My presentation discussed the fact that M.N. Tukhachevskiy laid the groundwork for arbitrariness, intolerance and the defamation of people who thought differently in the realm of military science. Look at his appearance in Leningrad in 1931, when he called Professor A.A. Svechin "an agent of

interventionist imperialism," "an agent of the bourgeoisie," or later at a session of the Comintern, where he defamed V.A. Melikov with the same expressions. You see that one cannot justify Tukhachevskiy, as well as some other figures, only because they were subjected to Stalinist repressions.

Some other places in my presentation are distorted in this published "record" as well. They could say that the editors of the newspaper published what they received. But why such a lack of fastidiousness? The official shorthand record of the secretariat of the GRK or the texts of the presentations could have been requested if there had been any desire to investigate this objectively (at least for comparison). One cannot find out the truth using dubious information.

A number of the aforementioned features use aimless and isolated accusations to screen themselves from the essence of the questions that were discussed at the GRK session. It will be difficult for the reader to understand what we are talking about, what we are breaking our lances over, without at least the briefest of reminders. And we were talking about exceedingly fundamental and important problems, first and foremost the considered nature and scholarly grounding of political evaluations of the prewar years.

It was emphasized in the course of the discussion, including in my own presentation, that an objective and valid history would not be written if we did not rid ourselves of prejudice and one-sidedness in the approach to historical events.

We could not, on the one hand, write a history of the war while we were justifying everything that we did, even the clear miscalculations and errors, remaining silent or avoiding and stepping aside from the most difficult and complex issues. And one naturally cannot agree with those who do not understand this. It is also impermissible, on the other hand, to subordinate our entire understanding of prewar history to contrived historical treatments dictated by the interests of today's political struggle. The advocates of this approach to our past are pursuing just one aim, obvious to all—to depict the entire history of our country, starting with the October Revolution, as an utter criminal mistake. The assessment of all events is driven by this preconceived aim, a stipulation not yet proven or substantiated by anyone.

Assertions that are not substantiated by anyone, without serious scholarly research and in spite of the historical facts, are being made that the civil war was unleashed by the Bolsheviks alone, that the "Whites" were practically forced to participate in that war, while they talk about the Red Terror but remain silent about the terror on the other side, even though Denikin, Berdyayev, Milyukov and other figures with a negative attitude toward Soviet power were forced to admit, in time, that the revolution in Russia was engendered by the profound political and

economic crisis and the need for radical changes in society, and did not hide the repulsive aspects of the White movement.

The manuscript of this volume speaks in a number of cases, not without foundation but in an extremely one-sided manner, about the negative aspects of the building of socialism, but remains silent about, or mentions only in passing, the major transformations, great achievements in industrialization and ascent of culture and science in our country. They try to justify this stance by saying that little was said here before about the negative aspects, and it is necessary to write only about those today. But can we really arrive at the truth by racing from one extreme to the other? The piling up of sensations is not yet the truth. A one-sided approach inevitably leads some historians, commentators and, sometimes, the authors of this work to other blind assertions—the guilt of the Soviet Union, not just fascist Germany, in unleashing World War II, the complete lack of preparedness of our country for war, the fact that the totalitarian regime was the source of all of our failures at the start of the war etc.

The advocates of such views do not even want to think about the fact that the state and social order that existed at that time pertained to the achievement of victory, and not just to the defeats. Our order is bad? It promises only defeat? Then how can these facts be: France and England in 1940, bourgeois-democratic countries, and Germany in 1945, under a fascist totalitarian regime, suffered crushing defeats.

It turns out that an unequivocal approach is impossible here. As for victory, it was not guaranteed to us from the start. One could not count on an easy victory in such a large war with a powerful adversary. But our people triumphed nonetheless. Why?

They say, "We don't want to write a false history." But what kind of valid scholarly history can there be, if you ignore all of these fundamental historical facts and do not reply to the vital questions posed by life itself? That is the complexity and difficulty of writing our prewar history, that it is exceedingly multi-dimensional and contradictory. The humanitarian and just socialist ideas (as opposed to people-hating fascist ideas) that the majority of the Soviet people (and after all, they did not know much of what we know today) genuinely believed in, selfless labor in the name of a better life, on the one hand, and the flouting of the ideals of freedom and democracy, mass repressions against their own people, on the other. Clearly no one today will deny the monstrous deformations that occurred in the economic and political order of our society, and somebody will hardly take it upon themselves to justify the Stalinist methods of collectivization in agriculture. It is also true, at the same time, that many people were working on construction sites with great enthusiasm in the first five-year plans and did not feel themselves to be enslaved; not everyone was chased forcibly onto the kolkhozes, there are still people living who really joined the collective

farms voluntarily, at their own initiative. The economic and defensive foundation created before the war played a decisive overall role in attaining victory in the subsequent course of it. There is also no doubt of the fact that the usurper regime of Stalin did not allow the fullest utilization of the opportunities that did exist to repel the enemy. The troops in the western military districts had not been brought to military readiness to repel the aggression as a consequence of Stalin's arrogance and miscalculations, and that was the main cause of our failures at the start of the war. And so it goes on all the issues.

It goes without saying that we cannot understand prewar history if we do not uncover all of the flaws of Stalinism. But this cannot be done in simplistic fashion, assuming that he existed off to the side from each of us. In the words of V.P. Astafyev, "all of us, all of our genes, bones and blood, were permeated with the time and air created by Stalin."

Almost every page of the manuscript speaks of the totalitarian regime and the administrative-command system. But it is not set out in reasoned fashion just what, in concrete terms, in which aspects of the preparation of the country for war, that it showed itself in negative terms, and where it would have been altogether impossible to manage without it under the conditions of the prewar years. Imagine what would have happened to our country if the restructuring that is occurring here today (with all of its chaos in the political and economic life of the country) had started in the 5-6 years before the war, despite the obvious promise and positive aspects of the democratic transformations for our time. No issue can be understood and covered correctly when considering it divorced from the actual conditions of its time.

The accentuated malevolence toward their own country on the part of some of the authors of the manuscript was also noted at the GRK session when discussing the manuscript. The skeptical attitude toward such things as the institution of universal education in the country in 1930, for example (the authors remark in parentheses that this was done 100-150 years after the developed countries—there's the totalitarian regime for you, they say, they dragged it out, they were in no hurry). But that really was an achievement for us, after all. The hundred or more years that preceded it pertained to the former tsarist order, and not to Soviet power.

Or, as is stated in the third part, "The technical backwardness of the Red Army was not ascertained in a timely manner..." But even back in 1928 it had just 200 tanks, a few hundred motor vehicles and aircraft. Our military technical backwardness was not only ascertained in timely fashion, but an enormous amount of work, well known to all, was underway in that realm, as well as a number of others, in our country.

Any people could be horrified by its past, as has already been justly noted in the press, if only the negative is

assembled into the history of the state (including the United States or England), tearing it out of the historian context.

It would not be amiss to look at this fact when one has a desire to investigate our past objectively. Not one leader of a democratic movement, not one of the "superintendents of restructuring," not one of the revisionist historians feels his past life to have been good-for-nothing or in vain. A.N. Yakovlev recalls his front-line fate and activity in the postwar years with a feeling of duty done. B.N. Yeltsin, in "Confessions...", acquainted the reader with his full-blooded life, filled with boiling energy. The historian A.N. Mertsalov, who has recently concentrated his principal attention only on the negative aspects of the Great Patriotic War, only comes to the history of the 92nd Mortar Regiment, in which he served, and everything is depicted in iridescent tones. "The main thing here," he writes, "was the high professionalism and conscientious fulfillment of their official duties by the overwhelming majority of the servicemen." There are as many examples as you like, and we do not intend to call them into question.

But why, in all this, dismiss many other people who are also not inclined to feel their own lives consist of blemishes alone? How can a modern-day Tarelkin, moving "ahead of progress," live a life full of noble deeds today if all of the history of our people was so gloomy and cheerless, as it is often depicted?

Our how can we approach such a cardinal issue as the possibility of averting World War II? The idea that our country did not do everything possible for that is spread in the manuscript of the work. But it may be concluded from what we know today that with the disposition of the military and political forces that existed before the war, the profoundly preordained nature and aspirations of fascist aggression against the East and the utmost support for that policy by the western countries, in the face of the comparatively limited political and economic might of the USSR, that there were not sufficient opportunities for averting the war at that time. The Soviet leadership actually made it its aim to delay the start of the war as long as possible, and that aim was by and large accomplished.

These conclusions have been buttressed by a large quantity of documents and facts in our historical literature. And they have not yet been refuted by scholarly evidence. It is clearly not valid to transfer the standards of the new political thinking of our times to the 1930s. The more so as it is not always possible to avert war by political means even today, and it is necessary to resort to force, as happened in the Persian Gulf.

Trustworthy historical sources and archival documents are undoubtedly essential for writing a truthful history. The headline in NG, "They Will Not Let Us Have the Truth About the War," clearly signifies that the unfortunate generals are hiding those documents. But not all of the documents are at the Ministry of Defense. The

documents of the Stavka of the Supreme Command, in particular, were taken from the General Staff after the war. Dmitriy Antonovich Volkogonov writes that he has "studied the closed archives a great deal, including the personal archives of Stalin..." (ROSSIYSKIYE VESTI, No. 6, 1991). But not all of the generals have had that opportunity, although one must agree that it will be impossible to reproduce the historical facts reliably without some important documents. Even Molotov and Zhukov, after all, describe the work of the Politburo on the night of June 21 and June 22, 1941 differently. There is much such contradictory information.

At the same time, regrettable as it may be, it is clear, when soberly assessing the situation, that we will also have to deal with the fact that access to some portion of the documents will not be open for some time to come. The authors of articles who assert that access is open to all documents from the wartime period "in civilized countries" are also engaging in craftiness and speaking untruths, since it is well known that access to some documents will be closed in the United States, England and some countries for another 20-30 years; for example, the documents on the visit of Hess to England, among others.

But historical truth is not simply seeking and reproducing documents. A grasp of historical truth also presupposes serious research and profound analysis of contradictory data and facts. But it is namely this painstaking work in which some of the authors of the manuscript did not want to engage, where much information is presented in the form of borrowings from previous editions, even though they do not correspond to historical reality.

Voroshilov said at one time that 40,000 people in the command and administrative staff suffered from the repressions in 1937-38. And that figure is repeated in this work. But the question arises for the reader, how many suffered repressions before and after that period? The abolition of sole command responsibility in 1937 and 1941 is described, along with its restoration in 1940. Was this good or bad, what were the consequences? It is impossible to receive an answer to this and many other questions.

Or, for instance, they take the archival data of the armored directorate on the number of our tanks. But they count up all tanks for our side (including those that were clearly obsolete or not battleworthy), while they took only those tanks that were functional for the Germans. About 5,000 captured tanks seized by the German Army in the rout of the Anglo-French, Dutch and Belgian troops, as well as Czechoslovak and Polish tanks, among others, are omitted entirely. The presence of these tanks in the German Army is confirmed by W. Müller-Hillebrandt and other German historians. Rudimentary scholarly reliability demands a common denominator, a common approach to counting and comparing the quantity of arms and military hardware of the warring sides.

Stereotypes from prior books on the war are repeated in the manuscript on a number of important issues, without critical interpretation in light of new facts and documents. Much was written in our historical literature, for instance, including by some well-known memoir writers, that one of the causes of our failures at the start of the war were an incorrect determination of the sector of the main enemy strike (it was expected in the southwest, but it came in the western sector). But that did not have as decisive an influence as is depicted, since our troops also suffered defeat in the southwestern sector, where we had our principal forces, while the enemy carried out the attack without using his principal forces. The sector chosen by the Soviet command for the concentration of the main effort was moreover chosen not in the interests of a strategic defensive operation (such an operation was simply not envisaged and not planned for—and that is the chief mistake), but for a quite different mode of operation, where the western military districts were to have gone over to the offensive after the rapid repulse of the enemy incursion and the completion of mobilization.

But the choice of sector for the concentration of the principal effort in the southwestern sector mentioned above for such a mode of operation, which did not occur, was entirely well-founded and more advantageous than the western sector. A main strike in the southwest lay on the most advantageous terrain, cutting Germany off from its principal allies and oil, and brought our troops to the flank and rear of the main enemy groupings. A main strike in the west led to a frontal clash with the principal forces of the German Army, and required a breakthrough of fortified areas on very rugged terrain.

One cannot judge such issues in abstract fashion. They can be considered in well-founded fashion only proceeding from the strategic tasks posed, the mode of operations selected at the time and other specific conditions of the situation.

Two different questions are often mixed together when assessing the Soviet-German Non-Aggression Pact and its consequences—what it provided from the point of view of a gain of time and strategic space, and how effectively those gains and potential opportunities were realized in practice. The myth of the “preventive war” of Hitler against the USSR has not been properly dethroned, even though there is adequate documentary information for it.

Many different rumors are current in the press that we were so poorly prepared for war that there was only one rifle for every two soldiers. But there were 8.3 million rifles and carbines in the Red Army by the start of the war, with soldiers numbering 5.5 million, and so on.

It seems to me that the authors of the work should not have evaded such ticklish questions that would disturb the public, but rather provide well-substantiated answers to them.

The sections of the manuscript pertaining to the military doctrine, military science and military arts and the state

of operational and combat readiness of the time are written especially poorly and without sufficient skill. These issues have moreover been set forth in separate fragments in different chapters. One thus cannot gain an integral depiction of them.

Questions of the strategy and organizational development of the armed forces are moreover covered in the work on the basis of views set forth in various books and military journals of that time. One can obtain only an insipid and superficial depiction of what really happened on the basis of such sources. It is necessary to research the operational and mobilization plans, materials from exercises and war games and the actual plans for the development of the Red Army and Navy at the time in order to make a competent judgment on genuine prewar views in the realm of the military arts and the organizational development of the armed forces.

The shortcomings in historical research set forth above are also typical of a number of other, previously cited works and articles. How many features are there, for instance, saying that our combat losses in the last war were 4-5 times higher than the fascist army? Even D.A. Volkogonov asserts that “our manpower losses over the course of the whole four years of war were roughly three times higher than the German losses...” (KOMSOVOLSKAYA PRAVDA, 22 Jun 91). Perhaps Dmitriy Antonovich has some special sources and proof confirming these data? I think not. If they do exist, they must be substantiated by the appropriate sources and published.

I was the chairman of the commission to establish our losses during the war for a number of years. Major demographic scholars participated in that commission along with the military specialists. Representatives of Comrade Volkogonov were also there, by the way, first the deputy chief of the GlavPUR [Main Political Directorate], and then the chief of the Institute of Military History. They signed the final documents. It was established after quite prolonged and careful study of documents from the General Staff and other archival information that the overall irrevocable losses of our armed forces were 8.6 million people (and allies, 75,900), and the irrevocable losses of fascist Germany were 5.5 million, with 1.2 million for its allies (a total of 6.7 million).

Our losses really were very grave, but they were not such as is sometimes depicted all the same. No one disputed this information in principle in a multitude of discussions, including Dmitriy Antonovich. It was published in an article by the chief of the General Staff, General Army M.A. Moiseyev (VOYENNO-ISTORICHESKIY ZHURNAL, 1990, No. 3). But that information has been unable to be published anywhere except military publications for several years now. If someone had brought in more stunning figures, they would clearly have been published immediately, without even any interest in where they had come from or what they were based on. This pertains to the information on prisoners of war and many other issues. Tell me how to “give out” even that

part of the truth that does exist, in the face of such an extremely biased approach, if there is simply no interest in it.

I once wrote to the head of one of the popular journals that there was no need, in the given instance, to ask the naive question of why there was such one-sidedness and bias in the features. It was understandable to all that the need for scholarly historical truth was far from the forefront in the process of ferocious political struggle. The legitimate facts and data often do not fit into *a priori* set schemes of political stances, and they thus prefer to avoid them. They are clearly just not up to the reasoning that would be so ethical before the memory of the people who perished and fought, with the too-willful and careless treatment of the facts in the heat of the clashes of group ambitions.

It is somehow not even proper to talk of pluralism under conditions of such universal impatience toward other views.

All of this is explainable, in a way, in light of all the above. But it is difficult to understand why this lack of respect is displayed even toward one's own readers. After all, they should also receive reliable information sometimes, and not just what somebody wants to suggest to them.

In conclusion I would like to agree with the fact that the truth cannot sully history. But it should really be the truth, which cannot be given out or taken away like a toy. The truth does not lie on the surface, it must be sought and dug out via serious historical research and scholarly quest, via the businesslike comparison of opinions and arguments on specific questions.

The history of the war cannot be written from preconceived ideological positions, and adjusting history to fit this or that ideology has never brought any benefit. History must be written as it was in reality. Then the negative and positive aspects of history, in all of their complexity and contradiction, will take their natural places in it. And there should be a rudimentary respect for one's own country. A decent person should not write about even our failures or losses with *Schadenfreude*, proceeding from the fact that another country is always right. As was done by the author of a letter published recently in a journal: "Why have they dispelled the memory here that we declared war on Japan? We attacked, routed them and seized the islands and South Sakhalin." About what happened before that, about how Sakhalin fell to the Japanese, not a word. And from whom has the memory been dispelled? And do people need some truth that is so hostile toward one's own country at all, anyway?

If we are obliging somebody abroad and certain forces in our own country, we will justify Hitler, the Japanese militarists and the traitors in everything and revile our country for everything (even for the fact that they attacked us), we will continue to diminish our state, we will find no truth at all.

We will not speak of patriotism either. That sacred word has also been cursed today. But, as has already been said more than once, we probably have the right to count on ordinary civility, albeit to such an extent as Maupassant's plump woman. Even though she was a woman of easy virtue, she did not want to deal with the prejudices that had invaded her country. Even that level of civility could seem fleeting with today's mores. But, in any case, matters will hopefully not reach such idiocy where they say that the victory of Hitler would have saved us from Stalinism and they justify traitors like Vlasov and Bandera, depicting them as "warriors" against Stalinism.

At the same time they are depicting those who defended the Motherland, and saved today's generation of Soviet people and all of mankind from the threat of fascist enslavement, in a most unattractive light. The future Decembrists of 1812 had a negative attitude toward autocracy, but it did not enter their heads that they could profane their Motherland as the enemy due to that. And we were protecting our Fatherland, and not Stalinism, during the Great Patriotic War, we were fighting for the hope of a better future. And thus no one has a greater vested interest in sensible transformations in this country than veterans of the war. And they are all blindly depicted as conservatives.

All of historical experience testifies to the fact that one cannot build a new and more worthy society based on lack of memory and razing "to the ground." Creation has to begin sooner or later, and some sort of historical foundation is needed for that. It is thus impermissible and blasphemous to use the history of the Great Patriotic War, where the greatest sufferings and heroic deeds of millions of people came together, to satisfy someone's parochial, ideological interests or egotistical political ambitions.

Espionage Role in World War II Atom Bomb Program

91UM0824A Moscow SOYUZ in Russian
No 21 May 91 p 18, No 22 May 91 p 18,
No 23 June 91 p 18

[Three installments from the book "Ot Los-Alamosa do Moskvu ["From Los Alamos to Moscow"] by Vladimir Chikov, prepared by Nikolay Aleksandrov]

[No 21, May 91 p 18]

[Text] *Absolutely Not Top Secret. From Los Alamos to Moscow. History is opening up its archives and new pages that previously were not only impossible to read but also threatened death are being offered to the new generations to read. The fate of our own nuclear bomb was held under the cover of a secrecy that gave rise to rumors and legends. Truth and invention, fact and fiction—everything was interwoven. Political commentator Vladimir Chikov has reconstructed the events of those distant days strictly on the basis of the facts, and we are starting publication of pages from his book in SOYUZ. It is not some imaginary*

hero who acts in it but very real people—Chekists, scientists, politicians. Everything in this story is true...

Right at the Very Beginning of the War...

On day 136 of the war Beriya received a telegram late one evening from the residency in London. It was reported in code that Soviet intelligence had obtained top secret materials on theoretical work being done in England to develop a uranium bomb that possessed colossal power equivalent to several thousand tons of TNT, and that all the develop work was being conducted in great haste and was being driven on by the fear that the Germans might develop a similar weapon first.

That same evening Beriya went to the Kremlin to report this information to Stalin. Without even waiting to hear everything, Stalin slowly raised his arm, and just as slowly said this:

"Wait, Lavrentiy... The Germans are already at Volokolamsk, and here you are launching into a fantasy.... I do not believe this... And I advise you not to believe that it is possible to win a war using some kind of chemical element that no one has even seen. Does this not seem to be pure propaganda to you?... Done deliberately to distract our scientists from work on new kinds of weapons for the army?..."

"It is quite possible, Comrade Stalin, that this is the latest piece of disinformation aimed at diverting us into an unpromising business" Beriya agreed.

"Then I would like to know, Lavrentiy, whether the laws of nature in general allow an explosion equivalent to the force of several thousand tons of TNT. What do our scientists say about it?"

Beriya was not ready to answer that one, and without thinking too long, he said:

"Our scientists, Comrade Stalin, are still focusing their efforts only on theoretical research. As far as the prospects for using uranium for military purposes are concerned, according to Academician Ioffe this is still no more than an idea, and he says that it would take decades to demonstrate whether or not it can be done. And in general, atomic weapons are hypothetical weapons. Perhaps, perhaps not..."

Puffing on his pipe Stalin was silent for a long time: He was remembering how once, before the war, he had received a letter¹ in which in connection with the discovery of the splitting of the uranium atom the idea had been expressed that it might be possible to make bombs of extraordinary power. But like most other people in power, Stalin was unable to recognize and foresee at that time the significance of this, because the very expression "nuclear fission" meant little to him. Nevertheless, Flerov's arguments and his conviction that "no time should be lost in making a uranium bomb" left him uneasy.

While he turned his thoughts back to Beriya's report, Stalin was still chewing on this problem, calculating that

under conditions in which the Soviet Army was suffering defeat after defeat, the immediate task was to provide the front with shells and aircraft and tanks. And so he summed up the talk about the intelligence from England with this laconic remark.

"Yes, Lavrentiy, we are not about to develop this kind of superbomb, but keep tabs on it."

Two months later Beriya received information from intelligence at the front about secret mathematical calculations taken from a German prisoner. An examination by the scientists showed that they were calculations about heavy water and uranium²³⁵, indicating that Germany was also working to develop an atom bomb. Then a second letter was sent by Flerov to the State Committee for Defense, addressed to Stalin, repeating the suggestion that it was necessary to build our own atomic weapons, which would enable the Soviet Union to achieve military superiority in the war against Germany immediately. But Beriya was in no hurry to report this letter to Stalin, and he decided that he would only when he received another encoded telegram from London that read as follows:

"Moscow Center,

"Top Secret

"For Aleksandrov² Personally

"The 'Maud Committee'³ has reported to the Minister of the Aviation Industry Muir Brabazon, and then to Churchill that an atom bomb can be made before the end of the war if it is deemed necessary to make proper appropriations for it. In the development plan the calculations have been made for the numbers of people, electric power and money needed, and its external dimensions, explosive power, and possible number of casualties have been determined. It is planned to build a test plant for uranium²³⁵ in England and an industrial production plant in Canada.

Since it needs a great deal of financial assistance, England has proposed to the United States that further work to develop the atom bomb should be done on a cooperative basis. The President of the United States, Roosevelt, has approved the exchange of scientific and technical information with Britain and has sent a personal message to Churchill proposing that all efforts along this avenue could be coordinated and carried out jointly.

"Vadim"⁴

Now, when he had gathered together into one package the diary with the mathematical calculations done by the German prisoner, Flerov's second letter from the front, and the encoded telegram from London, Beriya went to the Kremlin, to Stalin...

Right at the Very End of the War...

Moscow, the Kremlin. I.V. Kurchatov's working office on the third floor. On his desk lay intelligence materials

on the atom bomb, in English. Yelena Mikhaylovna Potapova, a translator with the USSR People's Commissariat for State Security [NKGB], has helped Kurchatov to translate them. As an expert on the English technical tests she has access to these documents only with Beriya's personal permission. Familiarizing herself with the hundreds of pages of diagrams and blueprints and graphs and calculations and descriptions, which none of the other scientists in the room have been invited to study, sometimes took days at a time. Since he was unable to generate into a single broad spectrum all the theoretical and practical ideas of those working on the American atom bomb, on Potapova's advice, after a certain time Kurchatov has sent a letter to the USSR NKGB:

"Top Secret

"One Copy Only

"To Comrade G.B. Ovakimyan

"With respect to the accompanying document No 1/3/6134 dated 6 April 1945, I have been sent exceptionally important material on the 'implosion' method.

"It contains information on the following:

"1. The atomic characteristics of the nuclear explosive material.

"2. Details of an explosive method to activate an atom bomb.

"3. An electromagnetic method for uranium isotope separation.

"In light of the fact that the material is very specific, I request you to allow Professor Yu.B. Khariton access to work on the translation.

"Professor Yu.B. Khariton is working in the laboratory designing the uranium bomb and is one of the country's leading experts on explosion phenomena. Up to now he has not been given access to the materials even in the Russian textual version, and I have only informed him verbally of the probabilities for spontaneous fission of uranium²³⁵ and uranium²³⁸ and the general principles of the 'implosion' method.

"I. Kurchatov."

The conclusion reached in the appraisal made by Academician Kurchatov of the intelligence information from agent "Perseus"⁶ (document No 1/3/6134 dated 6 April 1945) was of fundamental significance:

"Top Secret

"In section 1 the data on spontaneous fission of heavy nuclei is of exceptional importance...

"... In paragraph 6 of this section a table of tremendous importance shows accurate values for the fission cross-sections of uranium²³⁵ and plutonium²³⁹ by fast neutrons

at various energies. This table... enables reliable determinations of the critical dimensions of an atom bomb. But I am still unclear with respect to how such a high degree of accuracy was obtained in determining the cross-sections of both uranium and plutonium.

"In section 2.... a method is shown for detonating the bomb 'by an internal explosion,' something that we learned quite recently and on which work is only just being started. However, its advantages over the 'colliding projectile' method are obvious.

"In light of the fact that research on this method here has not been started, it is now impossible to formulate the questions that need further elucidation. This can be done later, after serious analysis of the material being reviewed. But I would think that it is essential to show the text to Professor Yu.B. Khariton.

"The text of section 3 is contained on a single page but it is also of great interest to us....

"I. Kurchatov

"7 April 1945

"One Copy Only"

When Kurchatov made the long journey from Moscow to Chelyabinsk, near where in 1945 the construction of a special-regime project known as "project A"⁷ was initiated, hundreds of diagrams and documents connected with the development of the atom bomb were delivered to him personally in a special car, in a massive safe under a strong guard of NKGB people. Since he was overburdened with economic concerns about the construction, on his own responsibility and at his own risk he started to pass them out for expert examination by his own academy colleagues:

—to Abram Isaakovich Alikhanov—the piles and the reactor;

—to Isaak Konstantinovich Kikoin—on the diffusion installations;

—to Yuliy Borisovich Khariton—on the atom bomb design.

Footnotes

1. The reference is to the first letter from the then young physicist Georgiy Nikolayevich Flerov.

2. The code name for USSR NKGB chief of foreign intelligence.

3. The Military Application of Uranium Detonation—the committee dealing with the military application of the explosion of uranium.

4. The code name of the chief of the residency in London 1940-1943—A.V. Gorskiy.

5. By explosion.

6. Perseus was the code name of the intelligence officer "Fielding," who worked at Los Alamos, the place where the American atom bomb was born.

7. A uranium-enrichment plant now known under the code name Chelyabinsk-40.

[No 22, May 91 p 18]

[Text] For an objective assessment of the political realities in the United States, Soviet intelligence was interested not only in the research and practical work on the range of problems relating to the atom, but also the mood of the scientists. Late in 1944, during the course of military operations in Strasbourg the Americans captured documents reflecting the course of scientific work on uranium in Germany, and on this basis it was possible to determine that despite the universal fear that had justified and provided incentive for the efforts of the nuclear scientists, the Germans were still not close to the development of nuclear weapons. At that time they had not yet succeeded in separating uranium²³⁵ and there was no reactor to produce plutonium.

The fear that Hitler's people would possess an atom bomb dissipated immediately after that, and after the allied forces had invaded German territory, none of the emigre scientists working at Los Alamos had any doubt that the war would soon end. Among the scientists the conviction was beginning to grow that there was also no need to develop superbombs and thus protect mankind from the insane horror that they were preparing for it by their own work. However, it was difficult for them to refuse to continue working on nuclear weapons; too much time and effort had been put into the Manhattan Project, and already the goal was now so close. And they had to consider the main conclusion of the military establishment that possession of the atom bomb would enable the United States to hasten the outcome of the war on the Pacific front and save the lives of an enormous number of Americans. Unfortunately, the scientists did not know at that time that Japan had potentially already lost the war, and they were unaware that the struggle against fascism was not the main mission of Washington's policy, and that the uranium bomb, if dropped on Japan, would then become a terror weapon that could consolidate the hegemony of the United States after the victory, and would in fact be turned against the USSR.

The Danish scientist, Nobel laureate Niels Bohr worked this out before the others. Before traveling to work at Los Alamos he met with the English premier, Churchill, and suggested that the secrets of making the atom bomb be shared with the Russians, and that an agreement be reached with them on the future control of this very terrible weapon. Churchill, however, rejected his suggestion. After he had arrived in America Bohr sent a personal message to Roosevelt in which he also warned him of the dreadful prospects of competition between states to acquire atomic weapons. It was claimed in his message that the country that became the sole possessor

of the superbomb should immediately act to conclude an international agreement to control the use of the active substances, by which he meant uranium and plutonium. Bohr believed that any temporary advantage, no matter how great, could not bear comparison with the permanent threat to the safety of all mankind. He proposed that first the personal links between scientists in different countries should serve as the means for establishing initial, unofficial contacts for the coming struggle against a new threat of war.

By a strange irony of fate Niels Bohr was even supported by the scientists who more than anyone had helped to involve the United States in the production of the atom bomb, namely, Leo Szilard and Albert Einstein. In the spring of 1945 they also sent a memorandum to President Roosevelt in which they asked him to halt the course of events relating to the development of nuclear weapons. In particular, Szilard claimed that the use of the superbomb in the situation prevailing in the world would do America more harm than good. Roosevelt, however, did not even see the document from Bohr, Einstein, and Szilard; he died without leaving any instructions pertaining to the use of the first atom bomb. Then the physicists working in the "metallurgical" laboratory at the University of Chicago set up a commission under the chairmanship of Nobel laureate James Frank. The commission prepared a report that was passed to the U.S. Secretary of War. In their petition the scientists drew attention to the fact that even if the methods used to produce the American bomb were kept an absolute secret, it would take the Soviet Union only a few years to catch up. In the interests of the United States it was essential to try to get an international agreement not to do anything that might as a consequence prompt other states to produce a similar bomb.

The opposition of the atomic scientists themselves to the use of the uranium monster enabled them to develop a struggle for peace throughout America, and this was promptly reported to the Center and to L.P. Beriia personally.

After he had familiarized himself with the contents of the encoded telegram written by the resident, Antonov¹, Beriia wrote across it in red pencil, from corner to corner:

"Comrade P.M. .

"1. I do not believe your 'Antonov.' In my opinion it is not as he reports.

"2. The political aspects of the atom bomb have been set forth in an encoded telegram which I ask you to recheck through Washington.

"3. Prepare information on this matter for the USSR Ministry of Internal Affairs.

"Beriia.

"17 April 1945."

Beriya had disliked "Antonov" (Kvasnikov) since 1940 when while on a mission abroad in Warsaw he had by chance met the representative of the Georgian Catholics Georgiy Peradze, who had told him that in 1919 Lavrentiy Pavlovich had maintained secret links with English intelligence agents. When he returned from Poland, Kvasnikov had brought to Beriya only greetings from Peradze and kept his silence about the rest, but Beriya felt that Peradze might talk about his past and so not only personally but through those close to him several times tried to find out what else the Georgian priest had said to him.

Of course, Kvasnikov knew that a sword of Damocles was hanging over his head, and so he was unbending in his repeated answers, claiming that he had not met Peradze one on one but was only one in a general conversation and therefore could say nothing else about him. Beriya, of course, did not believe Kvasnikov's assertions, and every time new information arrived from abroad about those doing the work on atomic weapons he had doubts about it, suspecting Kvasnikov of disinformation. These suspicions were strengthened even more after a number of the physicists who were in Beriya's "clique" during the war offered the official conclusion that it would not be possible to develop a uranium bomb for two or three decades. Neither did he believe Kvasnikov's report warning about the preparations for an experimental test of an atom bomb in the Alamogordo desert planned for 10 July 1945. Not only did he not believe it, he also demanded Kvasnikov's recall from New York.

It was not particularly difficult for "iron-man" Beriya, the people's commissar, to deal with just one more resident on whom the label of enemy, traitor, or double-dealer had been pinned. This tried and true method had enabled him in the period 1934-1939 to destroy the best cadres of Soviet intelligence. Many residents who had been placed beyond the pale were almost totally out of action before the war. Beriya was able to dispose of almost anyone and was not about to stand on ceremony with Kvasnikov, but he was perfectly well aware that "Anton" in America was determining the course of events, obtaining very valuable information about the atom bomb, in which Stalin often showed an interest. So he decided not to repress Kvasnikov, yet, but he continued to keep in "on the hook."

Subsequently, because of unfavorable weather conditions the date of the first atom bomb test was postponed to a later time and was timed for the opening of the Potsdam conference of the heads of state of the three great powers—the USSR, the United States, and Great Britain. Soviet intelligence had no information about the switch in the timing of the test, and so the Center was not promptly informed of it.

In people's memoirs and other literary materials repeated reference has been made to the fact the Present Truman told Stalin about the United States's development of a new weapon "of extraordinary destructive

power," and that the Soviet leader's reaction was surprisingly calm (Stalin simply did not lower his gaze, and this showed beautifully that he understood the significance of what he heard). Then Truman almost started to "brandish" the new kind of weapon, and to act, so to speak, from a position of strength, concerning which the U.S. Secretary of War H. Stimson wrote the following in his diary:

"Because at this meeting Truman rejected the demands of the Russians so energetically and decisively, Churchill realized that this had been prompted by some event."²

In his novel "Victory," A.B. Chakovskiy describes Stalin's reaction to Truman's statement: He gave Truman and Churchill to understand that negotiating with the Soviet delegation from a "position of strength" was a futile business. After he had returned to his residence on the Kaiserstrasse, Stalin immediately telephoned Academician Kurchatov and demanded that the work to develop a Soviet atom bomb be accelerated. In fact, it was Beriya that Stalin telephoned, not Kurchatov. Let us reproduce this brief telephone call from the recollections of one of the intelligence officers who was in Beriya's office at that time.

"Hallo, Lavrentiy. Do you know anything about tests of the American atom bomb?"

"Yes, Comrade Stalin. According to our information it should have been tested two weeks ago, but we still do not have the results of the experimental detonation."

"You have been misinformed, Lavrentiy. A test of an atom bomb took place two days ago. Truman is trying to exert pressure, dominate... His attitude is particularly aggressive toward the Soviet Union.

"Of course, the factor of the atom bomb was working for Truman. We understand that. But a policy of blackmail and intimidation is unacceptable for us. We therefore gave no grounds for thinking that anything could intimidate us. Lavrentiy, we should not allow any other country to have a decisive military superiority over us. Tell Comrade Kurchatov that he has to hurry with his 'parcel,' and ask him what our scientists need to accelerate the work. We shall consider their proposals on this very soon..."

"Permit me to report to you, Comrade Stalin."

"No, Lavrentiy, we will hear you when we get home to Moscow. Goodbye." Intermittent whistling sounds had been heard on the line..

In a fit of irritation Beriya threw the telephone across the desk and then picked up the internal telephone.

"Pavel Mikhaylovich.³ Report here to me!"

Picking up a folder containing the latest reviews of the scientists of the intelligence material that had been received from New York, just in case, Fitin went to Beriya's office.

Beriya was a man of extreme views and firm convictions, and he either accepted people wholeheartedly or just as wholeheartedly rejected them and did not recognize that they had any right to live. When Fitin arrived, Beriya was seated, stretched out in a massive armchair, and through his pince-nez he fixed Fitin with an unblinking gaze. "Something is going to happen" the chief of foreign intelligence thought. And he was not wrong. Beriya bellowed with undisguised anger:

"Sit down, don't just stand there." Then, softening a little, but still angry, he added: "I feel that your Kvasnikov cannot escape the cellar⁴. But have you recalled him from New York, or not?"

"No, Lavrentiy Pavlovich."

"Why not?"

"There are no grounds for this."

"No grounds? But he is 'conning' you! Comrade Stalin has just telephoned me from Berlin and he said that the atom bomb test took place not on 10 July, as Kvasnikov reported, but just two days ago. What do you think of that?"

Fitin decided to fight for Kvasnikov.

"I can assure you, Lavrentiy Pavlovich, that he will never 'con' us. It is not in his nature. You can choose to disbelieve me but I can say with absolute honesty that Leonid Romanovich, with whom I have worked for many years, has during that time demonstrated true loyalty to his motherland. His services are beyond dispute, which can be seen in the fact that we now have an independent section for scientific and technical intelligence. And if we are saying that our department believes only deeds, then from the information obtained through Kvasnikov it has been possible to construct a mosaic, a quite accurate picture of his intelligence activity. Particularly on the atom bomb. I personally believe that all the materials received from resident 'Anton' since mid-1943 have become of growing interest. And as the chief of foreign intelligence I say once again with a proper sense of responsibility that Kvasnikov would not report to the Center anything of which he is unsure. He never slips in doubtful information and he does not mislead Moscow. And in order to convince you of this, Lavrentiy Pavlovich, permit me to show you the review conclusions of the scientists at laboratory No 2 about the material received recently from New York." Fitin handed Beriya the folder that he had had the foresight to bring with him.

Footnotes

1. L.R.Kvasnikov, resident for Soviet intelligence in New York from 1943.

2. The reference here is to a report from Washington on the successful testing of the first atom bomb at Alamogordo.

3. The chief of USSR NKGB foreign intelligence, P.M. Fitin.

4. In fact there were no cellars in the building on Lubyanka, but there was an internal prison on the sixth floor, and the word "cellar" was used rather by sorry tradition more than actual reality.

[No 23, Jun 91 p 18]

[Text] Beriya abruptly snatched the folder from the hands of the chief of foreign intelligence and pulled out the top document, written in the neat and accurate hand of Kurchatov, and in silence he started to read:

"Top Secret

"One Copy Only

"Conclusions on Accompanying Materials.

"No 1/3/3920 dated 5 march 1945, in the section marked

"'atom bomb'

"The material is of great interest. In addition to the methods and diagrams we have worked up, it offers possibilities that we have not yet considered. This relates to the following:

"1) the use of a uranium²³⁵ hybrid instead of metallic uranium²³⁵ as the detonator in the atom bomb;

"use of an 'internal explosion' to activate the bomb.... this method offers the possibility of increasing the relative velocity of the particles up to 10,000 meters per second if pressure symmetry is observed, and consequently this method must be preferred over the 'projectile' method.

"Interesting comments are included in the material on the question of the insulating material for the atom bomb. They match the results that we have obtained recently. In our designs we also plan to use beryllium for the insulation, but in metallic rather than oxide form.

*"I. Kurchatov
16 March 1945."*

Then, still without saying a word, Beriya took a second document from the folder.

"Top Secret

"Conclusions on the 'Review Article'

"The work is a fine summary of the latest information on the main theoretical and basic directions on the uranium problem. Most of them are already known to us from particular articles and reports received in the summer of 1940. But this review contains two new and extremely important and basic points:

"1) on the possibility of making the pile in a mixture of ordinary water and metallic uranium;

"2) on the existence of radiative neutron capture by uranium²³⁵ and plutonium²³⁹ and deviation from the 1/V law in the absorption of slow neutrons.

"... Since the possibility of making a system in ordinary water and metallic uranium greatly facilitates solution of the problem of creating the pile and thus obtaining plutonium, it would be extremely important for us to have detailed information on this system.

"From some of the experiments conducted at the USSR Academy of Sciences Laboratory No 2 it can be concluded that absorption of slow neutrons by uranium²³⁵ is not in accordance with the 1/V law. The review article being considered contains definite indications of these deviations and of the presence of radiative neutron capture by uranium²³⁵ and plutonium²³⁹, it is surprising that the cross-section for radiation capture by plutonium²³⁹ reaches approximately the same values as for the fission cross-section for the same isotope. This is in sharp contradiction of the fission cross-section theory developed by Bohr.

"It would be very important to obtain more detailed data on this question and to learn about the setup for the experiments in which three neutrons were found on each atom of plutonium split by a thermal neutron.

"A very curious remark is made on page 9 about the studies that were done at Laboratory V to determine the various physical properties (splitting, elastic and inelastic cross-section) of uranium²³⁵ and plutonium in connection with the problem of making the bomb.

"It would be very useful to obtain information on the setup for these studies in Laboratory V, and their results.

"In the article considered there is no indication of a magnetic method for releasing uranium²³⁵ but it would be extremely desirable to obtain information on this.

"I. Kurchatov"

After reading both conclusions of the chief of Laboratory No 2, and still not looking at Fitin, Beriia asked:

"Who underlined this in blue pencil?"

"Kurchatov himself. He picked out these places as a task for our intelligence."

"Very well," Beriia growled, and then took the next document from the folder, written in a different hand,, and he looked at Fitin in some perplexity. "And who wrote this?"

"Academician Kikoin."

Beriia's eyes again flashed with ferocious malice.

"But who allowed him access to the intelligence materials?... I have already told all of you that only the chief of Laboratory No 2 should have access to top secret information on the atom bomb, and that in the presence of one of our people! What is this arbitrary behavior?"

"Please listen to me, Lavrentiy Pavlovich." His chief of foreign intelligence broke in. "Comrade Kurchatov has recently been too busy with the organization of economic work in the southern Urals. They are organizing the production shop to enrich uranium. So in Moscow we have not always been able to find him. But as you are aware, the information is always 'hot.' The scientists are very interested in it. Six months ago Igor Vasilyevich made an official request to Ovakimyan to allow academicians Kikoin, Kharitonov, and Alikhanov access to some intelligence material on the atomic problem. Well, we met him halfway."

Fitin knew that Beriia treated Ovakimyan with respect and so, especially to soften the anger of the "iron people's commissar" he used the name of his deputy. Fitin's bet paid off. Beriia's anger subsided somewhat, and after replacing Academician Kikoin's memorandum in the folder, he involuntarily muttered:

"I shan't read it. But in the future, matters of access to any intelligence material on the atom bomb must be agreed personally with me."

He said no more about Kvasnikov; the assessments of Academician Kurchatov of "Anton's" intelligence material had evidently convinced him.

"Nevertheless, Pavel Mikhaylovich, tell your Kvasnikov," Beriia unexpectedly started to talk about the resident again, "tell him that he misinformed us about the date of the atom bomb test... He must be more responsible in the information he passes on..."

Fitin understood that Kvasnikov was saved from cruel punishment, and picking up his courage he moved to the offensive.

"But if the explosion has not yet taken place that means that Kvasnikov could still have been right, does it not? And I believe that the dates were changed for political motives. To time this thing for the opening of the Potsdam Conference and surprise Comrade Stalin and force him to make concessions in adopting political decisions wanted by America and England..."

"Perhaps that is so." Beriia relaxed. "But in order to make Kvasnikov rehabilitate himself for this inaccuracy let him immediately report the results of these tests to us..."

For the American general, Leslie Groves, and the "father" of the first atomic bomb, Robert Oppenheimer, the days of the final preparations for the experimental explosion in the desert at Alamogordo were the most worrying days of their lives. The question that worried them most of all was this: would the uranium monster that they had created explode? It should, according to the calculations, but during the final stage of the preparations technical defects suddenly appeared; true, they were quickly eliminated, but they had occurred just the same, and this put all those involved in the experiment on their guard.

The detonation of the bomb was planned for 0400 hours on 16 July, but just like the week previously, it was delayed one-and-a-half hours because of bad weather.

At 0530 hours an unbelievably blinding flash of light appeared over the Alamogordo desert. Then in the darkening sky, swelling and heaving, a gigantic and sinister cloud rose upward. The force of the explosion, which previously even the scientists had been worried about, exceeded all expectations; the measuring instruments located several miles from ground zero not only went off the scale but were simply destroyed. So it was that three weeks later the "Sun of Death" sank over Hiroshima, and again three days later, it reduced Nagasaki to ashes.

The atomic genie was out of the bottle and at large in the world.

Disbelief, fear, and then open panic gripped the scientists who had taken part in the work of the Manhattan Project. They had underestimated the significance of the new, hitherto unknown danger of radioactive contamination—that silent death that was not a property of earlier, traditional kinds of weapons. It evoked not only acute alarm but also the righteous anger of the entire world community. The Americans were particularly upset by the fact that the truth about the work on weapons of mass destruction had been hidden from them, and even the clumsy justification from the war department that America had needed the bomb for the still unfinished war against Japan was drowned in the outrage at the apocalyptic suffering of the Japanese people prepared for them by the American rulers.

All of this and much else beside was reported by Kvasnikov after he returned to work at the Center at the end of 1945 in his report of his three year assignment in the United States. Fitin presented Kvasnikov with a government award for the positive results achieved by the residency in New York. When Beriya learned of this he immediately summoned Fitin, and looking at him with astonishment, he said tauntingly:

"Your concern for the man is futile, Pavel Mikhaylovich. I was thinking of sending Kvasnikov down to the cellar, but you raise him up..."

Fitin felt a chill go down his spine.

"Yes, Pavel Mikhaylovich, yes, to the cellar." Beriya's tone changed, became almost affectionate as he added: "And this is very simply done: you yourself know that I do not make idle talk... So take away his award.

That was the "gratitude" of the man who stood at the control panel of the enormous scientific collective working on the atomic bomb, gratitude for the selfless and very risky work of the intelligence officer who under the difficult conditions abroad had obtained information that was invaluable for the Soviet scientists. Subsequently, at almost every meeting he promised Kvasnikov, like a joke, that he would "be sent down to the

cellar." Of course, this "graphic expression" could have been regarded as a poor joke. But Kvasnikov and many other intelligence officers were well aware at that time of the true worth of other, similar jokes made by Beriya.

Half a Century After the Beginning of the War

... Case No 13676 from the archives of the USSR Committee for State Security [KGB] foreign intelligence has only now fallen into the hands of the inquisitive researcher Vladimir Chikov. He pulls it in its turn from the enormous steely gray cabinets and patiently turns its pages.

The numbers, the wireless messages, the dispatches and memorandums and reports, the descriptions of agents. On each of them, notes from Beriya, from Merkulov, from Abakumov, Serov, Shelepin, Semichastnyy, and Andropov. All of them without exception chairmen of the Committee for State Security, some going down in history with a plus sign by their names, some with a minus sign, all of them were familiar with this case. What was it that caught their interest? Was it the fact that there had never been a "Russian" atom bomb? There was only the "American" bomb, skillfully detected by Soviet intelligence. Who were they, these secret illegals?

First of all there were former U.S. citizens the couple Morris and Leontina Cohen. And as we conclude the publication of this documentary story on the pages of SOYUZ we think that it is necessary to say something about them; right and their fate deserve this.

Morris and Leontina Cohen became famous throughout the world under the names of New Zealand citizens Peter and Ellen Kroger, but they were just pseudonyms...

In 1937 Morris went to Spain as part of the Abraham Lincoln International Brigade, and was seriously wounded in battle. After he had recovered he studied in the spy school in Barcelona, where he also started his cooperation with Soviet intelligence. After he returned to the United States he married and recruited his wife, Leontina Vladislavovna Petka. From that time on she was the courier, including for the very valuable agent "Perseus," who was working at the American atomic center at Los Alamos.

During the war years, as a member of the allied troops, Peter took part in the fighting in the Ardennes in Belgium and in France. He ended his combat road on the Elbe.

After the war the Cohens were the couriers for the well-known Soviet intelligence officer R.I. Abel (V.G. Fisher), and then, because of the threat of failure, they had to move from the United States to the USSR. After completing special training they were "sent" from our country to England as couriers for another famous illegal from Soviet intelligence, Gordon Lonsdale (K.T. Molodyr).

In January 1961 they were arrested in connection with the Lonsdale affair and sentenced to 20 years in prison. At the time of the arrest, investigation, and trial, and also during the trials of what was to be a 19-year incarceration they remained steadfast and courageous and gave away no secrets of Soviet intelligence. However, during the course of the investigation the British managed to establish the American origin of the Krogers and their involvement in the activities of Soviet intelligence in the United States (in the case of R.I. Abel). This considerably complicated the

steps to have them released from prison. It was only in 1969 that they returned to Moscow and for a number of years passed on their professional experience to their young intelligence associates. They have now retired with a pension.

Now it is time to tell about what remained a secret for more than 50 years and what the American and British intelligence services tried unsuccessfully to learn.

U.S. Strategic Deployment During Gulf War

91SV0032A Moscow MORSKOY SBORNIK in Russian
No 4, Apr 91 (Signed to press 26 Apr 91) pp 61-64

[Article by V. Kozhevnikov, under the rubric: "In Foreign Fleets": "U.S. Armed Forces Strategic Deployment During the War Against Iraq"]

[Text] The following is based on foreign press articles.

On August 6, 1990, the United States began preparations to create a powerful formation of its own armed forces in Saudi Arabia and the maritime regions adjacent to it with the approval of the government of Saudi Arabia and in accordance with the president's special directive on an emergency period and wartime. The operation for the strategic deployment of the U.S. Armed Forces received the designation Desert Shield.

The deployment of troops, military vehicles, and equipment began on August 12, that is, six days after the President made his decision. During the course of 1.5 months, 170,000 men and heavy equipment and weapons were delivered to Saudi Arabia. By the beginning of the war, the U.S. Armed Forces formation had grown to 415,000 men. Altogether during the period of preparation and conduct of the war, the United States deployed 540,000 men and over 3.5 million tons of cargo to this region. Supplies of fuel, ammunition, water, and food for 60 days of combat operations were created. A system was deployed to store them and supply them to the troops.

Of the total volume of cargo delivered from the United States to Saudi Arabia, 96 percent was sealifted.

How did the United States manage to carry out the deployment of a half million man army with a 60-day reserve of fuel, ammunition, and logistics supply items to a region that is 10,000 miles from the American continent in such a short period of time?

The answer to this question can be obtained if you review the primary directions of the White House administration's policy in the sphere of maritime navigation and its preparation for war.

During the 1980's, the U.S. Government, having stated that navigation would be called upon to a significant degree to assist in strengthening U.S. capabilities "to act in the role of the world leader," set forth the following initial tasks in this area:

- provide unified direction for all government naval programs with cooperation between the Navy, merchant marine, and appropriate state organs;
- guarantee mobilized preparation of the civil merchant fleet and ship building industry to rapidly increase the Navy's transport fleet; and,

—provide the timely deployment of the required U.S. Armed Forces contingent and the capability for them to conduct combat operations in practically any area of the world.

To resolve these tasks, the U.S. is conducting a series of measures on a timely and continuous basis.

While building merchant marine fleet vessels, the United States is providing the capability to rapidly reconfigure them for military purposes, they are developing systems for transporting military cargoes in them, preparing appropriate documentation for pre-equipping them during an emergency period and wartime, including with weapons, communications systems, and other special equipment, and they are also providing military training for their crews.

Merchant marine vessels must have a 30-35 day supply of fuel, water, and food, a sailing radius of 11,000 miles, cruising speeds of 20 knots, and the capability to conduct loading and unloading operations not only at piers of ports but also at roadsteads and in harbors. Ship cargo systems must provide loading (unloading) of outsized military equipment in areas of unequipped shores and on the high seas (with sea conditions of up to six balls).

Up to 3,000 men, almost half of whom are command staff, are annually involved in military training for merchant fleet seamen. They study operations for processing military cargoes, replenishing ships' supplies while underway, sailing under conditions of naval control of navigation, including in convoys, command and control of the ship in emergency conditions, and weapons employment.

The readiness of U.S. ports for strategic transport of the U.S. Armed Forces is achieved by conducting a series of organizational measures and by expanding and improving organs for supporting their operation.

At the present time, three ocean terminals at the ports of Bayonne (New Jersey), Sunny Point (California), and Oakland (California) have been transferred to the jurisdiction of the U.S. Armed Forces. They also control certain civilian terminals.

With the mobilization announcement, they plan to transfer 54 piers (12 of them for roll-on roll-off ships) at 21 ports to the military and, through a supplemental request, another 21 piers for container ships at 13 ports. Special reserve port subdivisions have been created whose mission is to support the uninterrupted throughput of military cargoes through ports during the period of mobilization and deployment of the armed forces.

The Naval Sealift Command and the Department of Transportation naval fleet administration carry out management of maritime deployments of military and economic cargoes.

The former is tasked to carry out all sealift. The latter is tasked to maintain the Reserve National Defense Fleet at prescribed readiness levels for loading and putting to sea

and ensuring cooperation of Naval Sealift Command and the ship building industry. During the threatened period and wartime, the total deployment of Naval Sealift Command and the National Defense Reserve Fleet (NRF) is achieved by augmenting manning using reservists and personnel involved in the merchant marine.

As a result of the fact that Naval Sealift Command has few organic transport assets (14 tankers, 21 bulk cargo ships, 13 weapons and equipment depot ships, eight Algol container ships with mechanized cargo divisions, and 12 depot ships for weapons, equipment, and material technical support of ground troops and the Air Force) under emergency conditions, the need arises to demothball NRF ships and to hire privately-owned ship companies to carry cargo.

The war against Iraq was a large-scale verification of the capabilities of U.S. Naval Sealift Command to support the conduct of combat operations by the American Armed Forces during a "medium intensity" conflict in the Middle East. It confirmed the soundness of Naval Sealift Command to conduct the functions assigned to it. At the same time, it revealed shortcomings in the readiness of Rapid Deployment Force transportation assets for heading out to sea and the inadequate level of support of NRF ships in readiness for operation. Thus, what follows are several primary factors of the war that has already faded into the past.

During the six days after the U.S. President decided to deploy armed forces to Saudi Arabian territory, the first fast-moving Algol roll-on roll-off container ships (which are prescribed to be on a 4-day readiness to put to sea) completed equipment loading and began to transit from U.S. ports to the Persian Gulf region. At the same time, 2nd Squadron depot ships from Diego Garcia and 3rd Squadron depot ships from Guam put to sea with U.S. Marine weapons and equipment.

On August 15, 2nd Squadron's depot ships arrived in Saudi Arabia. They had military vehicles and weapons for a Marine brigade (more than 50 M60-A1 tanks, 40 105 mm and 155 mm howitzers, 100 amphibious

armored personnel carriers, and 28 light armored vehicles), and also a 30-day supply of food (1.45 million disposable food kits), water (21 million liters), fresh water production devices with a capacity of 379,000 liters per day, JP- 5 fuel (nearly 29 million liters), clothing and medicine. By that time, ground, airborne, and marine personnel began to arrive via Military Airlift Command aircraft.

On August 27, the container ships Altair and Capella (Algol-type), which were carrying U.S. Army 24th Mechanized Division's heavy equipment and weapons, began to be unloaded at Saudi Arabian ports.

At the beginning of September 1990, the main units of the 82nd Airborne Division, 101st Airborne Assault Division, the 1st Marine Expeditionary Force, and the 25th Armored Cavalry Regiment began to deploy to Saudi Arabia.

On August 10, the U.S. President, while considering the limitations of Navy Sealift Command and NRF organic assets to transport troops, issued the order to demothball NRF ships and to lease or charter private companies' ships and aircraft to carry cargo.

By September 13, in addition to Naval Sealift Command's 37 ships, 42 NRF first-line reserve ships were taken out of mothballs and assigned to transport U.S. Armed Forces to the Persian Gulf zone and the initial lease payments were made to 10 American and 38 foreign private ship companies.

We need to note that 50 percent of the NRF ships that were in five and ten day readiness for loading experienced mechanical failure and 65 percent were put into the active fleet with delays of up to 20 days. Furthermore, three ships broke down while at sea and serious malfunctions were discovered in three others during loading.

According to foreign press reports, 173 transport vessels, of which 110 were leased for a prolonged period and 55 ships that were leased for only one trip, were transferred to Navy Sealift Command during the first four months of the strategic sealift. Ship leasing costs are listed in Table 1.

Table 1

Type, Designation	Ship characteristics		Cost per day in thousands of dollars	
	Capacity in tons	Under everyday conditions	While preparing for and conducting the war against Iraq	Increased tariff, in percentage
Cargo ship:				
medium	10,000	6.5	8.5	30
La Paix	13,684	5.0	12.0	140
Container Roll-on Roll-off				
Saudi Hail	38,000 (2,126 standard containers)	20.0	29.0	45
Merzario Italia	21,439 (1,306 standard containers)	13.0	20.0	54
Roll-on roll-off			35	

The total number of ships that operated in the interests of the U.S. Armed Forces and were subordinate to Navy Sealift Command, including hospital, rescue, and auxiliary, was 215, of which 122 were American and 93 belonged to other countries. U.S. Military Airlift Command's airlift capabilities were significantly increased by leasing 124 passenger and cargo aircraft from civilian airline companies.

Western experts think that the world has never previously seen a strategic sealift and airlift like this one. The loading of troops, equipment, ammunition and logistics supply items on ships was carried out at ports on the East Coast of the United States and in the Gulf of Mexico. Loading time per ship totaled two-four days. They carried out the transit to ports of Persian Gulf countries along the route: Atlantic Ocean—Strait of Gibraltar—Mediterranean Sea—Suez Canal—Red Sea—Arabian Sea—Persian Gulf. Ship transit time at an average speed of 12- 15 knots totaled 25-30 days and fast-moving container and roll-on roll-off ships (speed 30-33 knots) totaled 12-15 days.

Up to six-seven ships arrived each day at Saudi (Ad Dammam, Al Jubayl, Al Fudjar, Khor-Fakhan [as transliterated]) and Bakhrai (Manama) ports. Unloading time per ship, depending on ship type, totaled one-four days. The least amount of time was required for roll-on roll-off ships and for container-roll-on roll-off ships which conducted unloading using their own systems. The unloading rate totaled 10,000-20,000 tons per day.

During the initial period of the conflict, 300,000-330,000 tons and subsequently 450,000-600,000 tons of cargo were unloaded per month.

The overwhelming portion of ground forces personnel and no less than 160,000 tons of cargo were airlifted via the air bridge provided by 300 aircraft.

The list of cargoes delivered to Saudi Arabia to support U.S. Armed Forces combat operations and the cost of their volume for the first 1.5 months are shown in Table 2.

Table 2

Cargo designation	Quantity (volume) of cargo	Cost of cargo, in millions of dollars ¹
Military vehicles	Total delivered: 1,800 combat aircraft, 1,500 helicopters, 2,600 tanks, 1,400 guns, 990 infantry fighting vehicles	
Ammunition (aircraft bombs, artillery shells, rockets, mines, grenades, cartridges, etc.)	More than 100,000 tons (aircraft bombs)	72
Spare parts for aircraft, armored vehicles, and motor vehicles. Systems to reconfigure them to increase their capabilities under desert conditions		
Night vision devices, military toxic substance detection devices		
Medical equipment and medicines (antibiotics, vaccines, antidotes, substances to cleanse poisonous substances from an organism, etc.)		42
Individual chemical protection suits, camouflage clothing, camouflage nets, and paints that do not absorb military toxic substances	400,000 sets (clothing)	104
Military transport aircraft unloading equipment (loaders, prime movers, cargo trucks, etc.)		24
Ship unloading systems in unequipped ports and transport of cargo to designated areas		164
Mechanisms for constructing pipelines, creation of storage systems, and construction of facilities for quarantining personnel		205
Water, sanitation-technical systems, everyday life items and similar items to support life under desert conditions, including sun glasses, mosquito repellent, lip balm, and sunburn creams		250
Fresh water production systems, special water storage containers, flameless heaters for preparing food, etc.		230
Materials and supports for construction of prisoner of war camps	total capacity of up to 200,000 men	

1. The cost cited is for a cargo delivered to Saudi Arabia by October 30, 1990.

While summing up the results of the war by the United States and its allies against Iraq, it is not superfluous to also answer this question: how much did it cost to deploy the more than 500,000 man U.S. Army from the American continent to the Middle East? According to a Western expert assessment, transportation costs while considering supporting the U.S. Armed Forces in the Middle East for a minimum of six months after termination of combat operations totals nearly \$6 billion which is 8-9 percent of the total cost of the war.

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Cooperation with Germans in Disposal of Military Equipment

91SV0038B Moscow *RABOCHAYA TRIBUNA*
in Russian 9 Aug 91 p 3

[Article by Major-General, Candidate of Technical Sciences B. Surikov: "The Armor Is Strong but the Tanks Have Become Superfluous...."]

[Text] We all know that the Germans know how to work. But then a seven-man team could not disassemble a single combat vehicle during an entire week. By the way, we could do this together with quite a bit of success.

What does the withdrawal of our troops from Germany signify? It requires nearly 11,000 rail consists. Warsaw has requested a transit fee of \$16,000 for each consist and \$280 for each vehicle and we need to form nearly 3,000 truck convoys consisting of 250-350 military vehicles each. The Polish side also categorically objects to the movement across its territory of any ammunition that is in Western Group of Forces arsenals. Warsaw would also like to receive an additional one million dollars from the Soviet Union to repair its railroad network.

Let us recall that during the past 45 years the Northern Group of Forces has built homes, barracks, vehicle storage areas, and other structures—altogether a total of nearly three billion rubles. The Polish side has the longing to receive all of this free of charge or to pay a symbolic price. Warsaw is also demanding hard currency for the land on which our military facilities are located. In so doing, the Poles want lease payments beginning from 1945.

It is appropriate to recall that the Soviet Union provided modern weapons and military equipment under extremely favorable terms to our former allies during the 35 years that the Warsaw Treaty existed. Today their cost in freely-convertible hard currency totals many tens of billions of dollars. So, in the FRG [Federal Republic of Germany], the assessment of the weapons that we provided to the army of the GDR [German Democratic Republic] exceeds 80 billion marks.

Now, our former allies, while reducing their own armed forces, are attempting to sell Soviet-made weapons to the developing countries, to convert them for use for civilian purposes, or to destroy them. For example, a decision

has been made in the FRG to keep only 24 MIG-29 interceptors in the inventory. The remaining Soviet-made systems will be subject to being turned into secondary raw material.

This comprehensive problem is quite complicated, however, the shift of former Warsaw Treaty participants to market relations is opening broad possibilities for mutually beneficial cooperation. While organizing direct ties between the USSR and the East European countries, our country could assist them to convert tanks and armored vehicles with their weapons removed into all-purpose prime movers, bulldozers, and all-terrain fire-fighting vehicles.

Soviet experts have developed safe methods and technologies to disarm weapons and military vehicles. So, scientists from the collective of the Military Engineering Academy imeni Dzerzhinskiy have substantiated and experimentally verified disarmament technology of especially durable structures using special explosives. Using pin-point blasting, they can destroy tank armor in such a way that it can be used in the national economy. The expenses for experimental work that was conducted in the FRG to destroy one Soviet-made tank using torch cutting significantly exceeded the cost of the expensive armor obtained after destroying the tank.

We estimate that there is 1,700,000 tons of ammunition (shells, bombs, mines, ground-based and aircraft tactical missiles) and also other material-technical resources that have been accumulated in the Western Group of Forces. Germany receives 50,000 marks from us for each maritime transportation load of military equipment and ammunition to Mukran or Rostok. It is easy to imagine how much hard currency and rubles are required to use special transportation to transport all of our ammunition to the USSR.

Preliminary analysis indicates it is economically profitable to not return the majority of the ammunition to the USSR but to insure its safe disassembly and conversion into secondary raw material in the Western Group of Forces released funds.

Acquisition of valuable secondary raw material from ammunition is a quite complicated engineering problem. The main difficulty is compliance with strict safety requirements which automated enterprises for disassembling ammunition must satisfy. These facilities can begin operating in the troops only if they comply with the FRG's ecological requirements.

Besides ferrous and nonferrous metals, a great quantity of explosives will be obtained during explosives disassembly. On this basis, our defense industry can produce multipurpose water-resistant plastic charges for welding, forming, hardening items, and also for explosive cutting of steelwork, concrete and rock.

A ton of high-quality nonferrous or ferrous metals on Western markets costs in dollars: nickel—\$7,900, tin—

\$6,300, copper—\$3,300, zinc—\$1,750, lead—\$980 and, light steel—\$2,800. The secondary raw material obtained from the utilization of our ammunition will be cheaper than metal manufactured at specialized plants.

The savings from not transporting ammunition from Germany to the USSR and sales of a large quantity of secondary raw material, civilian items, and other military equipment to Western manufacturers may yield income of nearly \$1 billion.

We can carry out the proposed large-scale program for the utilization of ammunition and other military equipment only in the event that a Soviet-German Joint Scientific Production Association is created, for example, under the arbitrary designation "Razoruzheniye" [Disarmament].

The total cost of engineering structures built by us in the Western Group of Forces exceeds eight billion marks. A portion of these funds can be used in the event Razoruzheniye Joint Scientific Production Association is founded. The Soviet side can invest in founding capital the engineering facilities, defense industry technological equipment for the disassembly and utilization of ammunition and also the know-how to reprocess explosives into civilian goods.

Konvern Inter-Branch Commercial Production Center (MPKTs) has been created by government order to prepare the released military equipment for use in the national economy.

It is advisable to have an interim creative collective of defense industry experts, military experts and USSR Academy of Sciences scientists and also German experts under Konvern MPKTs. The German firm Kommerts Konsult from Frankfurt-am-Main may organize the involvement of German scientists and military experts in this work with whose help the USSR has already created a Soviet-German joint venture to produce civilian goods.

Hard currency income received as a result of the utilization and sale of military equipment in the FRG will augment a special USSR Armed Forces social protection fund. Their sales through a system of auctions may provide an additional several billion rubles to the servicemen's social protection fund and also to conduct USSR Armed Forces military reform.

Vorobyev on Tactical Lessons of Gulf War

91SV0042A Moscow KRASNAYA ZVEZDA in Russian
14 Aug 91 First Edition p 2

[Article by Retired Major-General I. Vorobyev, doctor of military sciences, professor: "Are Tactics Disappearing?"]

[Text] This unusual question can now be heard in the officers' collectives, and even seen on the pages of the press when the results of the Persian Gulf war are being

discussed. As are many others. Did new trends appear in that war in the development of military art, or were they purely specific phenomena peculiar to that particular operation? Is the relationship between the component parts of military art—strategy, operational art, and tactics—not changing, and the latter being shifted to the back burner? For the weight of land and air battles between the two sides was not so significant. The outcome of the operation was decided beforehand by the resources of the operational and strategic commands.

For the first time in the history of war we observed a case in which a very large grouping of ground troops (more than a million men) suddenly found itself unable to do its business, as it were; only a few of its units were for a short time engaged in active combat operations. It is also difficult to explain the following: why did the Iraqis' impressive superiority—three times as many divisions (45 against 16), and twice as much artillery (8,800 weapons against 4,058)—not influence the course of combat operations? Why were Iraq's powerful and hardly obsolete armor and tank forces, numbering more than 4,000 tanks, not used effectively?

Both objective and subjective factors caused the defeat of the Iraqi army, and many of them are now being analyzed by military experts. But we must draw attention to extreme views in the assessment of events. Some authors are expressing the opinion that the Persian Gulf war signifies the start of a new era in military affairs—the era of high technology wars.

There is also a totally opposite view of the recent war. It is regarded as "atypical," a "testing-ground" war, a kind of major "training exercise," training with a "designated" enemy. The multinational forces did not encounter resistance from the Iraqi army so how, they say, can we draw objective conclusions, on the basis of the combat operations, about the effectiveness of the weapons used, and likewise the tactical methods?

Of course, it is hardly correct to draw global conclusions about the prospects for the development of the military on the basis of one local war, of the kind where strategy "crushed" tactics, that present combat equipment should be scrapped, and so forth. In the war being analyzed much was specific and subjective. Notwithstanding, it would be a great mistake not to see the appearance in it of a number of new trends, in particular the development of tactics.

One instructive lesson from this war is that an army that cannot correctly predict new phenomena is a prisoner of outdated stereotypes and will inevitably suffer defeat. In all previous wars the combat experience gained was regarded as invaluable capital that multiplied the combat might of the troops many times over. The Iraqi military leadership was also counting on this: the Iraqi army had eight years of war against Iran on its account. It was believed that its superiority would guarantee success. Alas! the opposite happened. The doctrine of the previous war had obviously worked for the Iraqis. For

combat operations they counted on positional warfare, which did not give a good account of itself. Yes, the Iraqi troops were superb at creating a deep, echeloned defense. But the Iraqi command lost in the main thing—it was oriented on stability, and it was powerless to oppose maneuver of Airland operations of the multinational forces, which simply bypassed fortified lines, while the defending troops found themselves in an operational trap. Hence we can draw one unambiguous conclusion: the era of the “Maginot line” has finally been buried by history.

Now let us try to find a direct answer to the question of whether tactics are disappearing. Let me answer firmly: yes, they are disappearing. But there is a proviso here: It is a question not of the total rejection of tactics as an art in the conduct of a battle, but of tactics that have become obsolete and outdated. These kinds of tactics really are a thing of the past because new, modern tactics have replaced them.

The main feature of the war in the Persian Gulf was that a great deal of what happened was done for the first time. There, space “worked” for the troops right down to the tactical elements. Space-based surveillance and navigation largely insured success in the actions of the armored and mechanized units and subunits, not to mention the air forces. It was the first time that such large-scale use was made of the various new resources, means, and methods of electronic warfare. It was the first time that aircraft (the F-117A) used Stealth technology. It was the first time that aerial radar systems were used for surveillance of ground targets and to control strikes by the GSTARS. Finally, it was the first time that the American concept of the Airland operation was carried out in practice. All of this had to influence tactics in a very significant way.

The war showed that another element of modern battle must be added to the triad of fire, shock, and maneuver, namely, the “electronic fire strike,” that is, the combination of massive electronic counter measures and the destruction of the enemy by fire. Before this war, EW played a mainly support role. EW resources were given the mission of creating favorable conditions for success actions by tanks, motorized infantry, artillery, and air forces in smashing the enemy by suppressing radars used in his troop and weapon control system.

In operation Desert Storm, EW was organically “incorporated” into the system for effective engagement of the enemy and played an active offensive role. There was a merging of fire strikes and radioelectronic suppression. This signifies a higher degree in the development of tactics.

A new quality is seen here in the fact that the organization of EW and protection against it was until quite recently the prerogative of the operational commander, while it has now also become a function of commanders and staffs in the tactical elements.

A number of new features appeared in this war with respect to the fire strike. The decisive role of fire power in destroying the enemy has never been demonstrated so clearly in any operation in the past. It was significant that in terms of duration (88 days) and scale (a factor of 9) the “fire phase” of the operation was longer than troop actions on the ground (4 days). It became a prolonged “fire strike” as the result of which the Iraqis’ defense was so destroyed that there was no need to use an assault to break through the fortified positions. The intensity of fire destruction of the enemy increased sharply. Suffice it to say that at some periods, warplanes were carrying out 2,000 to 3,000 sorties a day. For comparison, let me point out that during the Arab-Israeli Six-Day war in the summer of 1967, the Israeli Air Force carried out 3,279 sorties, while during operation Linebacker-2 in Vietnam in December 1972 the American Air Force conducted 1,945 sorties. Quick target acquisition was achieved during the operation, along with mobility in bringing destructive weapons to bear, and in this an important role was played by the GSTARS missile system and carefully organized intelligence support.

Of course, this carefully planned system of fire destruction and likewise the EW, was fully realized during the operation only because they were carried out under conditions close to those on a test-range, without active resistance from the enemy. Accordingly, the experience gained should be viewed in a critical manner.

Under the influence of firepower and electronic factors, certain other features emerged in realization of the basic principles of battle, such as concentration, the element of surprise, maneuver, and coordination. Take, for example, the principle of concentration. Although strike groups of troops were created along the main axes, when this was being done no major concentration of tanks, motorized infantry and artillery was noted at choke-points along the front, as required by the American manuals. The main emphasis was placed on destructive firepower. The strike power of the troops was achieved mainly through concentration of firepower. But I think that this proposition cannot be regarded as typical. In dealing with a strong, active defense, one round of fire could probably not be adequate to complete a combat mission and it is still somewhat premature totally to abandon the creation of an adequate density of personnel and equipment, particularly for the purpose of achieving a breakthrough.

It was quite easy for the multinational forces command to realize the principle of surprise in the operation. Of course, it is impossible to disregard the considerable skill displayed here. The calculation was based primarily on “technical” surprise and taking advantage of technical superiority over the enemy. In the operational-tactical plan, surprise was achieved through totally “blinding” and disorganizing the Iraqis’ intelligence and giving it a false idea of the place, time, and method for delivering the strike, and the scale of the resources used. And here,

the organization of massive, timely electronic suppression of the enemy troop command, control and intelligence system combined with the subsequent air strikes was of very great importance.

One effective way in which surprise was achieved was bringing into action some kinds of weapons and combat equipment that were unexpected for the Iraqis. These included the F-117A Stealth aircraft, the latest E-8 GSTAR reconnaissance aircraft, the Tomahawk cruise missile, and the Patriot air defense systems.

One feature of the cooperation among the multinational forces was the combination of the principle of centralization and a certain degree of independence in decision making with respect to combat missions by the commanders of the various groupings operating along different axes. The precise, interconnected actions achieved between the air forces and ground troops and naval forces and within formations and units had been helped by the large number of exercises (more than 200) during the preparatory period. The command of the multinational forces made extensive use of "computer games" during the preparations for the operation in order to analyze the various scenarios for conducting an air, land, and sea operation, taking into account the information received from space-based surveillance.

The war rocked with new force the worn stereotypical ideas about the nature of modern combat operations. Its results may be evaluated in different ways, but its obvious lessons must be taken into account. The chief of these is that it is essential to conduct an immediate and fundamental review of existing views and propositions in the field of tactics, and cast aside more boldly and more decisively all that is obsolete, outdated, and musty in the methods of combat operations taken from the attributes of the two world wars. Past combat experience should not be underestimated, but it should not be held in a kind of reverence.

The intensity in renewal and modernization of the material-technical base for the troops are now such that new tactics will inevitably be born, along with a corresponding tactical thinking among military personnel. The tragic nature and sense of doom about the defeat of the Iraqi army, which in general was not really that weak in terms of technical facilities, was caused because its generals and officers failed to display the wisdom of foresight and did not re-orient themselves in time in their evaluation of the directions of development in military art. It was not the weakness of the weapons and combat equipment but habit and dogmatism and stereotype and conventionalism in troop command and control that were the main reasons for the bankruptcy. And this is a graphic lesson for everyone.

This includes our army. Soviet tactics have always been distinguished by their innovative character and flexibility. Our troops won the victory in the Great Patriotic War thanks to the fact that they made use of better maneuvering methods in their actions than did the

enemy, and displayed creativity and initiative, decisiveness and aggressiveness. These traditions must be enriched and developed.

NATO Issues Invitations to Study Courses

*PM2708151591 Moscow PRAVDA in Russian
15 Aug 91 Second Edition p 4*

[“Own correspondent” report: “Training Assignment...in NATO”]

[Text] Brussels, 14 August—A curious document has arrived at the PRAVDA correspondent’s office from NATO headquarters. It is an official statement from the press secretary of the North Atlantic alliance concerning a subject that until recently the most fervid imagination could not have produced.

The statement says that the North Atlantic alliance invites officers from the CSCE member countries to attend courses in NATO higher education institutions, including the leading one of these—the defense college in Rome. The aim of the courses is to get to know NATO better and in particular to get to know the way the alliance is responding to the changing military-political situation on the European Continent.

Having received this document, I did not even begin to clarify additionally—“just in case,” as they say—the extent to which it applied to the Soviet Union. And it is not just that our country is a participant in the CSCE process (as is known, you can think of various devious excuses if you want to), but that the statement clearly indicates: This initiative is based on the decisions of the NATO Council session held in Copenhagen two months ago. It was in these decisions, which were published in the form of a separate declaration, that the idea of opening the doors of NATO education centers to former opponents—who are now being seen here as future partners—arose for the first time. And officers from the armed forces of East European countries and the Soviet Union were named specifically among those invited.

Japan to Set Up Own Military Intelligence

*91UM0836A Moscow KRASNAYA ZVEZDA in Russian
27 Aug 91 Single edition p 3*

[Unattributed article: “National Defense Directorate Will Have Its Own Intelligence Center”]

[Text] The Japanese National Defense Directorate has decided to create its own intelligence center to collect and analyze military information. This is associated with the fact that when unexpected situations have occurred in the world, such as the Persian Gulf crisis and the recent coup attempt in the USSR, Tokyo lacked necessary information. And, as a result, Japan was late to take appropriate measures. Implementation of this decision is planned for 1995.

Two intelligence elements presently operate within the National Defense Directorate: the 1st Research Department, which is engaged in collecting domestic information; and the 2d Intelligence Department, which is responsible for collecting foreign information. In addition, two similar elements function in the Joint Chiefs of Staff, and the headquarters of the Ground Forces, Navy and Air Forces have research departments. The Joint Chiefs of Staff also receive foreign information from the command of U. S. forces in Japan.

The creation of the intelligence center is also intended to combine the existing intelligence bodies into one establishment. In connection with this, the possibility of organizing courses for training of intelligence officers in military schools is also being studied.

Border Officer Details Mujahidin Border Incursions

LD0509180391 Moscow TASS International Service in Russian 1033 GMT 5 Sep 91

[Text] Dushanbe, 5 Sep (TADZHIKTA-TASS)—“It can now be said quite definitely that the mine which exploded under an armored personnel carrier patrolling a section of the Soviet-Afghan border last Saturday [31 August] was planted by saboteurs sent in by the armed Afghan opposition”. This was reported to a TASS correspondent by Lieutenant Colonel Igor Kharkovchuk,

deputy head of an operations group of the Central Asian border district. It has been established that this occurred sometime between Friday evening and Saturday morning during an illegal crossing of the border in the vicinity of (Karaukteppa) [as received] peninsula where, with the permission of border guards, local villagers traditionally gather fodder for their animals. In addition to fragments of an Italian-made mine, border guards discovered several unexploded grenades at the scene of the incident. Fortunately, none of the crew or local civilians were killed.

According to Kharkovchuk, this is not the only armed provocation carried out by the mujahidin this year. Border guards foiled a group of armed mujahidin intruders who crossed the border and attempted to seize animals belonging to local villagers which were grazing near border fortifications. When the intruders realized the futility of their efforts to seize the animals and the shepherds, they opened fire on a border detachment which was pursuing them. During the exchange of fire one of the intruders was killed. In mid-August the mujahidin launched another bold operation along the Soviet section of the border. They captured a shepherd who was grazing his animals near engineering and technical structures on the border. After a resolute protest from border and Soviet authorities, the captive was returned.

USSR Defense Industries Conversion in Estonia

91UN2123A Tallinn RAHVA HAAL in Estonian
6 Apr 91 p 1

[Article by Tore Lasn: "USSR Defense Industries and Conversion"]

[Text] Since 1989, the USSR has begun making broader use of defense industries, including the manufacture of civilian products. This process is called conversion. If during the course of 1989, more than 300 industries underwent the conversion process, then that number increased to 420 during 1990.

The defense industry has great technical capacity. Soviet governmental evaluations reveal that the volume of military production and testing is comparable to the combined output of all other branches of the national economy. The plan for 1991 is to transfer approximately 220,000 military scientists and engineers to civilian posts.

Price deregulation (in effect as of April 2) should further encourage the conversion process. Defense industries will manufacture such consumer products as high quality electronics, calculators, vacuum cleaners, and refrigerators. Deregulation affects most of these products.

Military industrialists have started to organize technology and machinery auctions/trade shows. Numerous business and intermediary enterprises have been established. J. Vorontsov supervises inter-departmental production and is executive director of the business center "Konvern". Also, the "Maraton" Corporation deals with the creation of satellite network systems and includes enterprises falling under the Soviet Ministries of Communications, General Machine Building Industry, Radio Industry, Aviation Industry, and Electronics Industry, as well as Soviet shipping and enterprises of various other ministries.

Currently, ten ministries should be involved with defense industries according to a list printed in the University of California's publication "Soviet Union". Data from within the USSR further support this conclusion. Other departments are likely to be involved with the defense industries as well (i.e. Machine tool and machinebuilding, Electrical Equipment and Instrument Making Ministries, etc.) but no published references to that effect have been found.

While reading the following account, it is worthwhile to note how many individuals from these departments have gone on to become Prime Minister or Deputy Prime Minister.

Ministry of the Atomic Energy and Atomic Power Industry

This ministry was created in 1986 (originally it was the Ministry of Atomic Power). The Atomic Energy Industry belonged under the jurisdiction of the Ministry of the Machinebuilding and Toolbuilding Industry which was

liquidated in 1989. The former Minister of Machinebuilding, Lev Ryabev, (b. 1933) is currently Soviet Deputy Prime Minister.

Vitaliy Konovalov (b. 1932) is the current Minister of Atomic Energy and Industry. Konovalov is an influential and powerful individual in Estonia. The plants of "Dvigatel" in Tallinn and "Baltijets" in Narva, fall under his jurisdiction, as does the Sillamäe chemical-metallurgical plant which, until recently, still yielded uranium ore.

The ministry governs institutions dealing mainly with nuclear/atomic physics and chemistry. According to the Soviet government conversion plan, the enterprises that fall under the Ministry of Atomic Energy and Industry will start to manufacture calculators. For example, "Baltijets" has already made a start in that direction with a school calculator "Jukku".

Ministry of the Radio Industry

Minister - Vladimir Simko (b. 1938) In Estonia, the manufacturing and trade association "Orbita Service" falls under the jurisdiction of this ministry. It used to belong under the Ministry of Communications. According to Regulation 120, jointly enacted by the USSR and the Baltic Republics on February 7, 1990, "Orbita Service" should fall under Estonian jurisdiction.

The industries under this ministry deal with electronics, laser and high frequency wave technologies. Similar research directions have evolved under the Ministry of Communications and Ministry of the Electronics Industry.

In the course of the conversion process, the Soviet government plans to assign the manufacture of television sets and video sound systems to firms under the Ministry of the Radio Industry.

Ministry of the Electronics Industry

Minister - Vladislav Kolesnikov (b. 1925) In Estonia, H. Pöogelmann's Electrotechnical Works (in Tallinn and Sillamäe) fall under the ministry's jurisdiction. They manufacture printed circuits, semiconductors, and hearing aids.

Ministry of Communications

Some of the Ministry of Defense Industry enterprises came under the jurisdiction of the Ministry of Communications in 1989 when the old Ministry of Communications Media and Industry was liquidated. The head of the old ministry, Erlen Pervyshin (b. 1932) became the new Minister of Communications. The current Soviet Minister of Communications is Gennadiy Kudryavtsev (b. 1941).

Of the enterprises located in Estonia, RET [expansion not given] (formerly under the old Ministry of Communications Media and Industry) and the Tallinn branch of TUI [expansion not given] "Neptune" (which is in a

military zone) both belong under the jurisdiction of the Ministry of Communications.

Ministry of the Shipbuilding Industry

Minister - **Igor Koksanov** (b. 1928) Prior to Koksanov, **Igor Belousov** (b. 1928) was Minister of the Shipbuilding Industry. As of 1988, Belousov has held the post of Deputy Prime Minister.

This ministry has at least two enterprises in Tallinn: the Leningrad production center "Admiralteeditehas" Baltic Base and the Riia production center ERA [expansion not given] department number 5.

Ministry of the Aviation Industry

Minister - **Apollon Systsov** (b. 1929) **Ivan Silayev** (b. 1930) held the post before Systsov, from 1981-1985. Later, from 1985-1990, Silayev became Deputy Prime Minister and is currently the RSFSR Prime Minister.

The Tartu Control Apparatus Plant falls under the ministry's jurisdiction in Estonia. They manufacture electronic equipment for aircraft (i.e. black boxes).

On March 22nd, the exhibition "Aviokoversioon 91" opened in Moscow. The exhibits introduced new Soviet technological advances, materials, and equipment. Foreign specialists have also been invited to the exhibition which mainly includes displays of various metal alloys and other materials.

Ministry of Defense

Even this ministry, headed by **Dmitriy Yazov** (b. 1923), has its own enterprises. One of the larger plants for ship restoration, number 7, is located in Tallinn. It is quite probable that some other fairly large enterprise is located in Paldiski.

Ministry of the Defense Industry

Minister - **Boris Belousov**. Current Deputy Prime Minister **Yuriy Maslyukov** (b. 1937) and former USSR First Deputy Prime Minister **Lev Voronin** (b. 1928) both worked for an extended period in this ministry.

Ministry of General Machine Building

This is one of the most important, if not the most important ministry in the USSR. For example, Soviet astronautics ("Glavkosmos") falls under the jurisdiction of this ministry. Aside from dealing with space-craft, this ministry is also involved with the building of other types of rockets.

Oleg Baklanov was Minister of General Machine Building from 1983-1988 (b. 1932; currently Secretary of the CPSU Central Committee). **Vitaliy Doguzhiyev** (currently First Deputy Prime Minister whose father's name, by the way, is Hussein) held the post from 1988-1989. The Minister of General Machine Building as of 1989 has been **Oleg Shishkin**.

Within the ministry considerable advances have been made in the fields of chemical research and in the practical sciences. Per the Soviet government's plan, the ministry's industries should start to manufacture combines, vacuum cleaners, microwave ovens, Fourth Generation color television sets, refrigerators.

In Estonia, the Pärnu plant falls under the jurisdiction of the Ministry of General Machine Building Industry.

Ministry of Heavy Machine Industry

Vladimir Velichko (b. 1937), who became First Deputy Prime Minister in January, held the post of Minister of Heavy Machine Industry up until this year. His replacement has not yet been assigned.

Nikolay Ryzhkov (b. 1929; who has also held the posts of First Deputy Prime Minister and later Prime Minister) was Minister of Heavy Machinery and Transport Construction, as the ministry was then called, from 1975-1979.

This ministry's industries in Estonia, "Ilmarine" Machine Building Plant and "Talleks" Production Association in Tallinn, do not appear to have a strong military significance, as little effort has been made to keep information concerning these plants confidential. In addition, according to Regulation 120, "Talleks" and "Ilmarine" were to be put under Estonian jurisdiction. ("Talleks" is already under Estonian control).

Costs of Arms Cuts, Defense Conversion

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[Article by Aleksey Pavlovich Kireyev, senior consultant of the International Section of the CPSU Central Committee and doctor of economic sciences: "The Price of the 'Peace Dividend'"]

[Text] Attempts to assess the economic effectiveness of the foreign policy of the USSR were activated when the country began to slide even further into the abyss of the crisis and it was urgently necessary to seek additional means to patch breaches appearing here and there. The consumer psychology rose up against excessive expenditures for administration, space, defense, and everything else that did not visibly add anything to the increasingly empty store counters.

The question of the economic effectiveness of foreign-policy actions arose seriously for the first time in 1988 after the signing of the INF Treaty. At that time it was declared that the national economy received a real yield of tens of millions of rubles (R) in 1988 just through the conversion of industrial capacities involved in the production of these missiles. In addition, R300 million previously designated for military expenditures were put into the social sphere.

It was not possible to receive a satisfactory answer to the questions arising about how much the very process of the elimination of missiles will actually cost and what efforts and means will be required for this. Only a few times did debates arise in the press about the fact that perhaps the missiles should not have been destroyed through the method of blowing them up and burning them out, inasmuch as this leads to the loss of a large quantity of costly rare-earth metals (including gold, platinum, and silver), the ecology is harmed, and their potential for peaceful purposes is not utilized. But the treaty had already been signed and the destruction was proceeding precisely in accordance with the agreed schedule and no one was about to look into the economic details.

The next burst of interest in the problem of the size of the "peace dividend" occurred after the 28th CPSU Congress, where the corresponding data were presented. As E.A. Shevardnadze declared, the "peace dividend" from the realization of the foreign-policy course of the USSR based on the new thinking was supposed to amount to R240-250 billion over the five year period.¹

This figure is more than imposing—it is one-third of the Soviet GNP, about half of national income, and almost R1,000 for each one of us. It is also a considerable sum per year: R50 billion is half of the deficit in the state budget and equal to practically all Soviet imports.

Inasmuch as I do not know the methodology of the calculation, one must suppose that the indicated figure included all direct and indirect "dividends" that in one way or another have to do with the new foreign-policy course of the USSR. Clearly it was a matter of the intensification of international economic cooperation and an increase in the amount of aid from the West to the processes of reform in the USSR, the reallocation of resources from military to peaceful purposes as a result of the settlement of regional conflicts, the withdrawal of Soviet forces from abroad, the lessening of the general military confrontation, including in Europe, and many other factors that certainly have a positive influence on the international economic climate but are not well suited to statistical accounting and quantitative expression. It is possible that all of this is not so. But I repeat that the methodology of these calculations is still unknown.

The most tangible and easily accessible source of a "peace dividend" is the reduction of the military budget. Until quite recently this problem could be viewed only on the general theoretical level. Now that in October 1990 the USSR for the first time sent to the United Nations data on its military expenditures in accordance with the standard system of reporting used in this organization and after the confirmation of the military budget for the current year in January 1991, there is some information to consider.

Along with expenditures for the national economy, science, and agricultural subsidies, defense outlays are a most important component of the expenditure part of

the Soviet state budget, comprising 15-16 percent of it in 1989-1990. Until the announcement that Soviet military expenditures in 1989 amounted to R77 billion rather than about R20 billion, as was formerly thought, the major part of them, according to my estimates, were registered in the class of expenditures for the national economy (approximately one-third) and in the class of expenditures for science (about one-half).

In 1990 as compared with 1989, as was announced, the military expenditures of the USSR were reduced by R6.3 billion (8.2 percent). In 1991 as compared with 1990 (in constant 1990 prices), it is planned to make still another reduction—by R5.6 billion (8.5 percent). Altogether the savings within two years is supposed to amount to about R12 billion. This would seem to be the "peace dividend" of the new political thinking, for the expenditures of our state budget are being reduced and according so is its deficit.²

On closer examination, however, it turns out that it is not that simple. Above all the increasing inflation forces one to consider the same statistical indicators in constant prices (in the prices of a particular year) and in current prices (here they are called operating, actual, real prices, etc.). The severest property of inflation is the fact that through an increase in prices it "eats away" a substantial part of budget resources. In the current year, such was the fate of military expenditures as well: as a consequence of price increases of 25 to 65 percent for raw materials, finished output, services, and also wage rates, the military budget, having declined in constant prices, increased to R96.6 billion in current prices, or by almost 27 percent, in comparison with the previous year.

Considering that the average estimates of the rate of inflation for the national economy are somewhere around 12 to 14 percent, it is obvious that the military sector is experiencing a hyperinflation that is consuming budgetary resources twice as fast as in the economy as a whole. It follows from this that the saving of resources in the military budget is not even sufficient to cover the increase in the prices for output, which is remunerated through it, and additional state expenditures are required, not to mention some sort of "peace dividend."

In addition, in discussing the military budget, the military people have reasonably noted that they themselves are claiming a substantial part of that "peace dividend," which is obtained on paper if one computes the budget in constant prices. It is clear that funds are needed for military reform, the withdrawal of forces from abroad, a social security program for soldiers and members of their families, the construction of housing, etc. So they do not intend to turn "their" money over to anyone else.

An important reason why it is not possible to obtain any sort of a tangible "peace dividend" from the reduction of military—just as, by the way, any other expenditures—is the huge deficit in the state budget. Because it is one of the primary sources of all our economic woes, the task of

reducing and eliminating it in the reordering of the budgetary pie must have absolute priority in comparison with all other interests.

The reduction of budgetary outlays, whether they be military or any others, objectively lowers the level of state consumption and hence the rate of economic growth. The rate of capital turnover is diminished and as a result equal-sized investments in the military sector yield less profit. The loss of part of state consumption has repercussions on other branches of the economy that are linked in some way or another with the defense sector and forces them to make additional capital investments, including through budgetary means, to compensate for the lost production.

So that it is almost certain that a reduction of military expenditures will be accompanied by a proportional increase in budgetary investments in other branches of production, which may be quite significant in volume, considering the scale of the Soviet military economy and the degree to which most outwardly civilian branches are "grounded" in it. And in this case an increase in the budgetary financing of civilian branches may fail to give an adequate increase in the production of peaceful output, for it will have the nature of a replacement of lost military production.

But the most noticeable blow to the potentially possible "peace dividend" from the reduction of military expenditures will of course come from the transition to market relations, which is already being expressed in generally higher prices. Even despite the fact that price-assignment rather than price-setting tends to prevail in the defense sector, it will not be possible to maintain the previous price level for military output. Information is already reaching the press that, for example, the new price set by the government for one tank is more than twice the former price.

A chief of rear services of the USSR Armed Forces complains that the contract prices under which the army has to buy part of the output from civilian branches have multiplied: merino wool went from R20 to R52 per meter, cloth for a field uniform from R3 to R10.5 per meter, cotton nearly doubled in price, etc. Monopoly enterprises are demanding that the Defense Ministry allocate building materials, motor vehicles, and personnel for their needs and frequently that it pay for their output with foreign exchange. Under such conditions, it would be at least naive to count on an absolute reduction of the military budget and the possibility of utilizing the achieved "peace dividend" for civilian purposes. Most likely it can only be a matter of the nonincrease in the military budget by seeking internal budgetary reserves to cover the growing outlays.

Still another potential source of a "peace dividend" on which we are counting as we go the way of a lessening of international tension is the conversion of the defense branches of industry.

In accordance with the given political situation at the dawn of perestroika, conversion was supposed to become one of the factors in the improvement of the well-being of the nation and the increase in the production of consumer goods and equipment for the processing of agricultural output. Overcoming difficulties, conversion was called upon to help saturate the consumer market, raise the technical level of civilian branches, and strengthen the export potential of the country.

According to available calculations, over the seven years of conversion (1989-1995) it is planned to increase the actual volume of tape recorders issued by a factor of 1.4, refrigerators, television sets, radio receivers, and freezers by a factor of 1.5 to 1.6, electric vacuum cleaners by a factor of two, sewing machines by a factor of 2.3, and video recorders even by a factor of 33. The military-industrial complex is already producing the lion's share of these goods. At the end of the 1980's, they infused several dozen enterprises for the production of equipment for the timber and food industries into it, calling on them, through the corresponding programs and decrees, to raise the output of this equipment to a higher qualitative and quantitative level on an urgent basis.

This was the argument: in all the years of Soviet authority, we spared nothing to strengthen the defensive capability of the country, often giving the best production, material, and manpower resources to this sphere. Now, when social and economic problems have worsened, the people have the right to demand that the military-industrial complex provide effective help in resolving them. In reality, a situation has come about in which the defense industry turned out to be the last trump that we could present to the approaching calamity and imbalance in the economy so that we can somehow at least clothe and feed the people.

The draft of the State Program for the conversion of the defense industry for the period through 1995 was composed on an emergency basis. In it, as is customary in documents of this kind, the products list and volumes of civilian production that were entrusted to several hundred defense enterprises undergoing conversion were broken down to the last screw. After all, the "advantage" of the centralized planning system was precisely in the fact that Gosplan knew "better" what some faceless machine-building plant or machine shop somewhere in the Urals should produce.

Initially there was euphoria: the high-tech defense enterprises will give to the empty Soviet market video and audio equipment, stereos, and other such output that can be sold to the rich at insane prices ensuring a high standard of profitability to the enterprises undergoing conversion. But very soon it was found that the defense industry was being asked above all to produce prosaic kneaders, electric abattoirs, and canning lines that no one was in a hurry to acquire at prices several times higher than those of the prevailing price lists.

The euphoria died away when it was discovered that the cutting of the production of arms only diminishes the load on production capacities, a part of which simply stand idle, but does not permit their use for the issue of peaceable output. After all, it is not possible to alternate armored personnel carriers with trucks on the slowing military conveyor—the production technology is different. Some of the equipment turned out to be so exotic that it cannot be used at all except for military production.

They then began to calculate what quantity of resources have to be invested to reorganize or even simply to mothball military production before harvesting the "peace dividend" from its conversion. Unimaginable sums for the current state of the Soviet economy were invested in the state program of conversion: R9 billion for the reorganization of some defense enterprises for peaceful needs and another R31 billion for the creation of new capacities for the production of civilian output at defense enterprises.³

Of course it was telling that the military-industrial complex became accustomed to perceiving the terms "cost accounting" and "self-financing" as something abstract that does not affect it. They were always given as much money as they asked for. So why not try it again? You want conversion? they asked. You will get it but pay several billion from the budget for it. If you also want an increase in peaceful production, then this will cost you another 30 billion.

To somehow justify the situation that has arisen, numerous interviews with high-ranking leaders of the military-industrial complex began to appear in the press, in which they assured the taxpayers that major supplementary investments are needed only at the beginning. But later, when the conversion gets going strongly, the "peace dividend" will rapidly flow into their pockets.

It is extremely difficult to make forecasts in our dynamic time and no one can say what will happen with the conversion process after 1995. Most likely the present leaders of the military-industrial complex will no longer be around and the new ones will say that they are not responsible for the mistakes of their predecessors.

It is quite clear that one cannot expect any sort of a significant "peace dividend" from the conversion of the defense industry either today or in the next few years. Most likely it itself will require major supplementary capital investments.

Considerable hopes are linked with the physical reduction of arms and armed forces: it is no longer necessary to bear the burden of operating expenses or to repair and test armadas of weapons that will be eliminated in accordance with the Soviet-American agreements on the destruction of chemical weapons and on the reduction of strategic offensive arms and the multilateral treaty on the reduction of conventional armed forces in Europe. Besides the unilateral reductions of armed forces already undertaken by the USSR, this will also make it possible

to reduce their number significantly, freeing tens of thousands of highly qualified specialists for the national economy.

The reduction of individual types of arms also implies a reduction of their production. In the West in this instance, they usually calculate how much of the budget will be freed by abolishing some military program or other. In addition, not all of the arms being cut—under the Vienna treaty on conventional armed forces in Europe, for example—are subject to physical destruction. Part, and a very significant part, of the combat aircraft, tanks, and armored vehicles are subject to conversion for national economic purposes. There are already numerous projects for the peaceful use of the "nuclear triad": the launching of artificial satellites into space, the building of mobile laboratories on heavy bombers to monitor the ecology of the air space, and the use of submarines as excursion ships and the like. It is not without reason that all of this can be seen as a "peace dividend" of disarmament.

But no estimates are being presented of the potential gain for the peaceful economy if yesterday's armored personnel carrier will transport reindeer breeders of Chukotka and howitzers will drive piles. It is obviously primarily because they simply do not exist. It is well known from experience that the self-sufficient military economy is striving to raise the prices for its own output—after all, the state pays for everything—which are often a magnitude higher than the prices for analogous output in the civilian sector. The extremely inflated expenditures for purchases of arms and military equipment, which in 1990 were about 44 percent of the military budget here as compared to 27 percent for the Americans, speak for themselves.⁴ The cases of the ten-fold exceeding of list prices for such peaceful output as kneaders or cheese dairies that are occurring in defense enterprises undergoing conversion indicate that they are not able to produce goods even with the same overhead expenses as inefficient civilian enterprises. For practically all military equipment, they apriori incorporate a multiple artificial raising of costs, in part dictated by the extreme demands on quality, durability, etc. that are not required for civilian goods. So it is by no means such a simple matter to cover these enormous expenses even through the most intensive utilization of yesterday's military equipment for peaceful purposes.

The question of the realization of the disarmament agreements already signed is acquiring an importance of its own. Usually no estimates are given of their cost in the process of the development: the sides only approximately estimate the cost of inspections, various means of destruction, and expenditures for the protection of the environment and for service personnel. Especially since the elaboration of disarmament agreements, particularly in the last stage, usually proceeds in extreme haste; the participants try to coordinate their signing to a previously set date or a certain state visit. The real scope of expenditures required for the realization of particular

agreements becomes clear only when the corresponding state program is drawn up and the kinds of possible outlays are calculated.

The example of the disposal of chemical weapons is most illustrative in this connection. In the USSR, the production of chemical weapons was stopped back in 1987 and so no advantage has been obtained from this. At the same time, in accordance with the draft state program, there are three versions for the disposal of chemical weapons: do this directly at their storage sites, establish two regional centers, or build a single state center.

The first version requires the expenditure of R1.1 billion, the confiscation of 24,000 hectares of land, and the involvement of 6,000 to 7,000 service personnel. The implementation of the second requires R540 million in capital investments and R100 million for the reconstruction of railroads and for security. The cost of the third version is not being revealed, although it is known that on the order of R2.5 billion will be needed for the performance of the entire state program. But if one also considers the substantial indirect expenditures, above all for the support of the ecology, then the real outlays may turn out to be even higher.

At the present time, there is simply no money for any of these versions. But in accordance with the Soviet-American agreement on the disposal and nonproduction of chemical weapons, each of the sides is supposed to begin to dispose of them no later than 31 December 1992. By 1995, the annual rate of disposal must reach no less than 1,000 tons. It is necessary to destroy half of all reserves by the end of the decade and by the end of 2002 the sides have obligated themselves to reach the minimum level of reserves of 5,000 tons of toxic substances each.

The end of 1992 is not far off and it is possible that when the time approaches we, just as in the case of the INF Treaty, will have to hurry, feverishly buy facilities for the disposal of toxic substances in the United States, or, what is even worse, burn or blow them up through home-grown methods, thereby threatening the ecology. In accordance with Point 10 of Article 4 of the treaty, of course, it is possible to modify the time for the realization of the agreement but this is politically disadvantageous, for it undermines public confidence in the seriousness of the intentions of the sides.

Judging by the aggressive reaction of the military people to any comments with respect to the necessity of considering alternative versions for the disposal of chemical weapons that would make possible even a partial compensation of the expenditures for their production one can presume the following development of events. The Soviet military-industrial complex will be able to put a highly expensive state program through parliament, obtain the necessary billions (and since the government has no money, it is clear that it will simply have to print it), and "rest on the laurels" of disarmament, having ensured itself work of importance to the state for many

years to come. And all critical comments in this regard will be dismissed quite simply: they will say that it was the president who signed the treaty and not the Ministry of Defense and the chemical industry produced the toxic substances, not the Ministry of Defense, so call them to account. If you want us to dispose of the chemical weapons, then give us two or three billion rubles and, if the government makes the corresponding decision, so be it—we will do you the favor.

One cannot preclude the possibility that an analogous dead-end situation could also arise in the course of the implementation of the treaty on conventional armed forces in Europe. Under it, our country will have to eliminate (destroy or convert for use in the national economy) about 19,300 units of arms and equipment, including 1,300 combat aircraft, 7,600 tanks, 9,600 armored vehicles, and 760 artillery systems.

This Vienna treaty sets forth for the first time the possibility of utilizing part of the equipment to be eliminated for civilian needs. Of the above-named quantities, we have the right to convert 750 tanks and 3,000 armored vehicles into universal truck tractors, bulldozers and fire-fighting, emergency, quarrying, and drilling vehicles, cranes, and other kinds of equipment for the national economy. The cost of such conversion and utilization is not indicated in the treaty and apparently was not calculated prior to its signing.

It is difficult to say what a Soviet tank costs but an American M-1 "Abrams" costs about \$3 million. The most improbable peaceful occupations are being thought up for Soviet tanks—from tractor trucks for the taiga to a silage presser for the cattle yard. If one assumes that our tank costs less (because of the distorted system of prices for raw materials and supplies, low wages, etc.), then it turns out that in translating dollars into rubles, even at the official rate, one silage presser will cost an enormous amount of money. It would be interesting to know what kolkhoz or farmer will agree to purchase it?

As for the elimination of conventional arms, Hungarian economists have calculated that from \$4,000 to \$12,000 will be required to dismantle one tank, for example. That is a considerable sum regardless of the rate for the conversion of dollars into rubles. It is quite obvious that expenditures for the elimination and utilization of conventional weapons cannot be covered through the minimal gain for the national economy from the utilization of their parts and components for peaceful purposes.

So in this area of practical disarmament, the "peace dividend" turns out to be nothing more than a phantom that one would like to see and get a hold of. The trouble is that this is not possible.

Disarmament leads to a serious structural reorganization and often to an absolute reduction of defense branches of industry and armed forces. This, in turn, means the freeing of large numbers of people employed in these areas and the necessity of redistributing them among other areas of employment. In the West, the elimination

of jobs as a result of the cutting of military programs was always the strongest argument of the military-industrial lobby against the antiwar movement. This forced public organizations, trade union activists, and antiwar forces to present various kinds of projects to compensate for the jobs lost as a result of disarmament through the development of alternative peaceful production. But under the conditions in which the market was saturated with practically everything, it seemed improbable that an adequate scale of such production could be assured and hence projects of this nature did not elicit much enthusiasm among working people.

In the years of perestroika, we for the first time ran into the social side of disarmament when we announced a unilateral reduction of armed forces by half a million and the withdrawal of forces from Eastern Europe and also when we began to implement plans for the conversion of the defense industry, which, according to the most conservative estimates, will affect the fate of no fewer than four million people.

Western experience in resolving the social problems of armed forces shows that this is a pure load on the budget and that there can be no talk of any sort of a "peace dividend" here—even if one takes into account the fact that highly qualified personnel from the military sphere will go into peaceful production, thereby permitting an improvement in its efficiency and quality of output and the creation of new goods. In any case, this yield may occur only after several years and therefore it is practically impossible to assess its true scope, whereas pensions and benefits have to be paid to people today. For example, the American Veteran's Administration, with a budget of many billions, deals with a broad number of questions ranging from life insurance to the maintenance of military cemeteries.

Here no aggregate assessment was made of the expenditures for the resolution of the social questions arising in the disarmament process. Essentially they amounted to various kinds of supplementary payments to workers freed only as a result of the conversion of the defense industry. Separate assessments were made of the social outlays in connection with the reform of the armed forces. But those employed in the defense industry and military people saw only the state budget as a source of financing for the needs that are arising, counting on the moral responsibility of the society toward those who are defending it.

These demands came into contact with other social questions that the parliaments of all levels dealt with primarily and most often they took the form of general declarations of intentions not supported by any sort of serious economic calculations. True, the government made more specific decisions on compensation, preferring not to mention the sources of funding for such compensation. In most cases, obviously, the printing press went to work, filling the channels of the already sick monetary turnover with new and increasingly devaluated paper money.

We have not yet fully calculated the negative social consequences of the disarmament measures already implemented and of those in the future and we are not aware of them. One cannot exclude the possibility that in the future it will be necessary to spend greater and greater sums from the state budget to overcome them, sums that will substantially cover the incipient savings from the reduction of military orders.

How can the "peace dividend" be earned? How can it be transformed from a hypothetical idea to a practical reality? How can one see to it that disarmament not only strengthens international security, which is not well understood by the ordinary person, but also improves the conditions of his daily life?

It is quite obvious that it is impossible to implement disarmament without cost. Based on the laws of natural science, the level of these expenditures must be commensurate with the outlays for the development of arms systems. It is known from thermodynamics that just as much energy is required to destroy a substance as to synthesize it. Thus, improvement of the economic indicators is possible primarily through the rationalization of the very process of disarmament and the efficient peaceful use of resources being released, production capacities, and combat systems and their components undergoing cuts.

Historically it happened that for us the point of departure for the disarmament process was always negotiations between states culminating with the signing of bilateral or multilateral military-political agreements or the corresponding unilateral political decisions made by the highest bodies of authority under the pressure of domestic (reduction of the military budget) or international (withdrawal of troops from the countries of Eastern Europe) circumstances. Only after this did state programs in the USSR begin to be formulated for practical actions in some area of disarmament or other and very frequently it turned out that in practice it was difficult or even impossible to realize the achieved agreements in the indicated time and to receive a "peace dividend" in the process. Such a course of actions is very much reminiscent of the neo-stagnant steps in Soviet diplomacy, when at first they issued a glaring slogan (like "economic security") and only then did everyone begin to think together what it might mean and how it could be explained to our partners abroad.

With the signing of major agreements and the adoption of unilateral measures, the disarmament process is attaining such a momentum that structural changes in production forces are required. There is a dramatic economization of foreign policy in general and of its disarmament course in particular.

From this follows the **first conclusion**: among the most important elements of the prenegotiation process, along with an analysis of security questions, the balance of power, etc., one must include a detailed study and economic justification of the practical feasibility of the

planned arms reduction measures. It is theoretically possible that such a study may show too high outlays for the realization of the planned steps, which the USSR cannot afford at this time. This will require a change in political priorities as well. The slogan "disarmament at any price" is unacceptable today.

In this connection, in my opinion, the above-mentioned agreement between the USSR and the United States on the disposal of chemical weapons is a mistake. For us, from a technical point of view, their prolonged storage does not present any problems but there are practically no disposal plants or economically efficient technology. The Americans, as the chemists say, long ago began to "leak" and they would have to start disposing of their toxic substances in any case. But, after calculating everything, they adroitly involved us in this process, forcing us to spend billions on a crash basis. I cannot shake the thought that the agreement was prepared for the next summit meeting: it was simply necessary to sign something. After all, is it not so that the more agreements are signed, for some reason the more successful the visit is considered to be?!

Second conclusion: it is necessary to implant into the disarmament process the idea of cost recovery, which clearly at first will be nothing more than a good intention but may be materialized as a "peace dividend" as this process takes final form. It is sufficiently obvious that cost recovery of disarmament is an attribute of our foreign policy. It is not very pressing for the West, where arms cuts are seen as a source of new state orders for private corporations and, accordingly, as a factor stimulating economic growth.

It is conceivable that the economic approach to disarmament may even evoke the opposition of our partners in negotiations (as has already occurred in the course of the preparation of the INF Treaty), who in a number of cases are counting not without reason on the economic component of pressure on us as a means of achieving political compromises most advantageous to themselves.

For the USSR, the most capital-intensive and painful component of the disarmament process is the restructuring of the production base of the defense sector for the issue of peaceful output, that is, conversion. The people have even begun to use the expression "fell under conversion," which is generally used in explaining the reasons for the decline in wages, personnel cuts, and the loss of privileges. Indeed, this is a substitution of terms. This is not conversion but its absence under the conditions of the reduction of military orders. Such problems should not arise in competent conversion.

Hence the **third conclusion:** international agreements, just as unilateral steps in the disarmament area, must be linked with the course of economic reforms within the country and, in the optimum variant, organically include conversion, thereby making it not a function of sporadically attainable agreements and decisions but possibly the backbone of the technological restructuring of the

entire national economy. This, in turn, will make it possible not only to determine more precisely those spheres where we, from an economic point of view, are more prepared for political steps toward disarmament but also ensure real openness of the Soviet economy to the world.

Considering that the relative share of the military sector in our economy as a whole is excessively large, it is clear that the possibility of its transfer to a market course and consequently of its integration with the world market depends to a critical degree upon the introduction of market relations into the process of the conversion of the military economy. Only market relations based on a balance of supply and demand and the interests of profit maximization will truly reject all ideological considerations and will make it possible to implement conversion based not on momentary market considerations but on the interests of extracting the maximum "peace dividend."

All of this leads to the **fourth conclusion**, that in the process of disarmament the economy must become the object of national and international regulation with the help of instruments especially designed for this. But not such instruments as the law on conversion in the USSR, the draft of which got hung up somewhere in the Supreme Soviet. Rather it is the fruit of the efforts of the military-industrial lobby that is striving if not to preserve the status quo then in any event to carry out conversion administratively, through the mediation of directives from the Center, clothing them in the garb of the law.

At the national level, the state is asked merely to define its priorities precisely and to work out the means for the economic stimulation of the defense industry for their achievement and other than that to untie their hands. That is, in the stage at hand it is a matter not so much of the law on conversion as of a concept for the development of the economy under the conditions of disarmament. The mechanism for its realization must be the market and the objective the maximum "peace dividend."

At the international level, it is necessary to study the economic questions of disarmament in the course of the negotiation process while consolidating the achieved agreements in the articles of the understandings to be signed or the addenda to them. It is conceivable that the partner interested in accelerating the process of disarmament in some specific area or other may offer the other side the necessary credits, technology, etc. for this. There is already a precedent—the financing by the united Germany of the withdrawal and stationing of Soviet forces beyond the borders of its territory. Such an approach will permit a more even distribution of the costs of disarmament and an improvement of the economic efficiency of this process as a whole.

Fifth conclusion: The Soviet military doctrine in general and the mechanism of its realization in particular is in

need of substantial correction. Extremely little was done in the years of perestroika for the realization of the principle of reasonable defensive sufficiency. Whereas some changes did take place from the political point of view, this principle is not used at all in the economic sphere of defense production: the gross production of military equipment is continuing, expenditures on military science are declining, and appropriations for the social needs of military people are inadequate. Apparently it is now time precisely for an economic reassessment of our military doctrine.

And finally, the **last conclusion**: under the conditions in which the military departments have to be convinced to destroy arms and they refuse, for "the duty of the soldiers is to look after his weapon," it would be expedient to segregate all disarmament expenditures in a separate line of the expenditure part of the state budget. And accordingly, reduce the budgets of the military departments and force them to fight among themselves for appropriations under this line.

Such appropriations may be rather large. Just to take disarmament measures (elimination of arms, performance of inspections, reconstruction of former military facilities, etc.) and to calculate the expenditures under several basic treaties (on the disposal of chemical weapons, the reduction of strategic nuclear arms, the reduction of conventional arms in Europe, inspections under the INF Treaty, etc.), then my very conservative estimates show that in the next five years without conversion of the corresponding capacities on the order of R4-5 billion and significant sums in foreign exchange will be required. And the largest share of the outlays will be for agreements on chemical and strategic offensive weapons.

And in general, so as not to grope in the dark and not to nourish any extra illusions about the "peace dividend," it would be reasonable to ask the appropriate departments to fill out a very simple table. Its first column would show estimated indicators of the savings from: the reduction of expenditures for the development, production, purchase, servicing, and storage of military equipment; the use of this equipment and its parts, metals, and materials in the national economy; sales of reduced arms and their parts within the country and abroad; personnel cuts; the issue of civilian commodities at converted military production facilities; the difference in the cost of maintaining forces in the USSR and abroad; compensation for the military and social infrastructure established abroad; and other items.

The second column should include data on outlays for: the dismantling, disassembly, and destruction of military equipment; the conversion of its parts for national economic needs; the preparation of equipment for sale and its realization; the demobilization, job placement, and social security of personnel being cut; the conversion of the corresponding production capacities; the redeployment of forces from abroad; the establishment of a military and social infrastructure in the new places of

their deployment; and other items. The third column would show the real magnitude of the "peace dividend" obtained by means of the simple subtraction of the indicators of the second column from the data of the first. And by no means will the result always have a plus sign.

Mountains of incriminating materials were written on the exorbitant social and economic price of the arms race in the years of international tension. The price of the reverse process—disarmament—is also proving to be considerable. This price must be paid but there is no need to overpay. The scientific course that could conditionally be called "economic disarmament" could show the way to the obtaining of a significant "peace dividend" tomorrow after having paid a moderate price for disarmament today.

Footnotes

1. PRAVDA, 5 July 1990.
2. PRAVDA, 16 December 1989; IZVESTIYA, 12 January 1991.
3. KOMMUNIST, No 1, 1991, p 55.
4. IZVESTIYA, 12 January 1991.

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Soviet Military Specialist Criticizes Conversion
*LD1508175291 Moscow TASS in English 1308 GMT
11 Aug 91*

[By TASS correspondent Rena Kuznetsova]

[Text] Moscow August 15 TASS—The transfer of part of the arms manufacturing industry to the production of civilian goods has not resulted so far in the abundance of consumer goods in the Soviet Union. Lieutenant Igor Kurinny, head of the military-political department of Space Units at the Soviet Defence Ministry, expressed his opinion of the problem in a TASS interview.

He said that previously enterprises were ordered to turn out military products, while today the same methods are being used to force them to turn out consumer goods which do not correspond to their specialisation. For example, a new instrument-making and precise [as received] engineering shop was built at the Progress plant in Samara, the Volga region. It was to work for the space exploration industry. However, it was readjusted for the production of disposable syringes. No doubt, syringes are needed badly. But as a result of this decision military orders had to be distributed among five other enterprises of the industry. Transport and other expenditures went up, and the cost of the final product also grew. Ties between the enterprises that took many years to be established were disrupted.

There are other examples of ill-considered decisions, Kurinny continued. Specifically, household appliances are manufactured with the help of the equipment intended for high-precision machining of parts, which is unnecessary for many of those products. As a result of it, the cost of the manufactured consumer goods is extremely high.

Kurinny stressed in conclusion that the first thing needed today is a long-term comprehensive programme. So far as individual directions are concerned, he believes that it would be reasonable to stop the reduction of investments, primarily in space exploration.

Soviet-Bulgarian Joint Venture To Produce Light Aircraft

PM0209110591 Moscow Central Television Vostok Program and Orbita Networks in Russian 1536 GMT 26 Aug 91

[From the "Vremya" newscast: Report by A. Paulyus, identified by caption, from Plovdiv, Bulgaria]

[Text]

[Paulyus] What we saw in Plovdiv may appear to have nothing in common with the theme of our report. Yet this structure which is making children so happy [video

shows water slides at a swimming pool] was produced at a defense industry enterprise. Plants of the Bulgarian Defense Ministry are currently producing some 500 types of civilian goods. In accordance with the government's conversion program, defense enterprises are to produce such goods worth almost 19 billion lev by 1995.

Bulgarian specialists have concluded that it would be expedient to pool efforts with similar enterprises on the Soviet side. And so the Bulgarian "Metalkhim," the Lyakhovtsy machine building plant and a number of other Soviet and Bulgarian enterprises have agreed to set up a joint venture—"Aviatekhnik"—to be built here on the outskirts of Plovdiv.

It will produce civilian light aircraft. The Soviet side has assumed responsibility for training staff for the new production unit.

[I. Ivanov, deputy director general of the "Aviatekhnik" company, identified by caption] The new aircraft will be produced in several versions. There will be a sports version, a version for businessmen, an air ambulance, and several other versions which will essentially be produced in parallel.

[Paulyus] The first aircraft will take to the air at the beginning of next year.

KGB 'Alpha' Brigade Commander Interviewed

91SV0052A Moscow LITERATURNAYA GAZETA
in Russian 28 Aug 91 p 5

[Interviews with former commander of the Alpha group, KGB Major General Victor Karpukhin, by LITERATURNAYA GAZETA correspondents Dmitriy Belovetskiy and Sergey Boguslavskiy, and with Alpha subunit commander Lieutenant Colonel Mikhail Golovarov and deputy commander Lieutenant Colonel Sergey Goncharov by Yuri Shchekochikhin: "They Refused To Storm the White House"]

[Text]

The Alpha Group Leadership Gave Their First Interviews to LITERATURNAYA GAZETA

On 10 July, a month and a half before the putsch, in the article "The Lithuanian Card," LITERATURNAYA GAZETA was the first one to tell about the role of the KGB's Alpha group in the tragic events that horrible January in Vilnius. Just as the OMON [Special Purpose Militia Detachments], which had been originally created only for the purpose of combating organized crime, the task of Alpha (subunit A of the Seventh Directorate of the USSR KGB) was to combat first of all—and only!—terror and terrorism. But, as had happened with OMON, our politicians started using Alpha for their blood-stained affairs, which they called politics. Their politics. For the purpose of preserving their power.

I remember how we received a call after the newspaper publication; we were told that Alpha rank-and file—and not only rank-and-file—members are tired of being a card in this soiled pack. This information came to us directly from Alpha.

During these three horrible days the defenders of the White House were waiting for Alpha to show up. The name of the previously supersecret KGB subunit repeatedly was mentioned loudly, openly, sometimes even on the White House radio.

Alpha never came. After Russian President Boris Yeltsin's appearance on Russian television, we know why.

Saturday, 24 August, 1400

Interview with the commander of the A brigade (until 24 August of this year), KGB Major General Victor Karpukhin, by LITERATURNAYA GAZETA correspondents Dmitriy Belovetskiy and Sergey Boguslavskiy.

[Question] Victor Fedorovich, did you know that a coup was in the works?

[Karpukhin] No, I did not. The first time I heard about what happened was on the radio, early in the morning on 19 August. I was summoned by the KGB leadership and received an order from Kryuchkov personally to deploy my subunit in order to arrest Yeltsin and deliver him to one of the specially equipped places in Zavidovo.

[Question] Were you not surprised by such strange order?

[Karpukhin] I am a soldier; my business is not to wonder—it is to fight. I was only told that Gorbachev was gravely ill and could not run the country, a state of emergency had been imposed, and it was necessary to neutralize the destructive forces.

[Question] Did you have an order to kill Yeltsin?

[Karpukhin] No. Only to arrest and isolate him.

[Question] How did the events develop from there on?

[Karpukhin] We immediately arrived on site. Posted observers right away. I knew Yeltsin's every step; I was registering his every movement. We could have arrested him at any moment. Yeltsin's protection is not good.

[Question] Why did you not arrest him?

[Karpukhin] I will tell you frankly: The country needs order, but I knew from the very beginning that these people would not be able to run the state. There are no strong personalities among these eight. They are not capable of anything individually; they had only dared to take this step as a "band." Therefore, I did everything to do nothing.

[Question] How did you manage to do that?

[Karpukhin] From there on, my contact with the KGB leadership was only through a radio telephone. They tormented me, made me report to them on our actions almost by the minute. I kept explaining that it was not a good idea to go for an arrest in the dacha enclave, that there could be witnesses and innocent victims. Although you have to understand that my boys are so well trained that nobody would have noticed anything. My vehicles were positioned around the entire enclave; we blocked all the roads; but we still allowed two Russian Government ZILs to get out.

[Question] Did Kryuchkov guess that you simply did not want to comply with orders?

[Karpukhin] Probably. The entire KGB leadership knew that they could not bypass me to issue the order. The members of my subunit carry out only my orders. By removing me, they would immediately "mess up" the coup. We were the only force they could lean on.

[Question] Were you supposed to storm the White House?

[Karpukhin] Yes. On the evening of 19 August, a closed meeting took place in the USSR Ministry of Defense. It was conducted by General Ochalov; Moiseyev and Akhromeyev were present, and Yazov dropped in several times. I was given an order to spearhead the coup. The following units were operationally subordinated to me: a division of OMSDON [Separate Special Purpose

Motorized-rifle Division], Moscow OMON, and special subunits of the three directorates of the KGB—15,000 people in all.

[Question] Were you current on the events taking place around the White House?

[Karpukhin] Of course. Operational visual recording was being conducted. Our agents were among the defenders and inside the Russian parliament all the time. Together, General Lebed and I surveyed all the barricades. Frankly, they were "toy" barricades; they could be taken by a small force.

[Question] What was your battle plan?

[Karpukhin] At 0300 OMON units clear the square—disperse the crowds using gas and water cannons. Our subunits then make their move. From the ground and the air, using helicopters, grenade launchers, and other special equipment... We take over the building.

My boys are practically invulnerable. All of this would have taken about 15 minutes... In this situation, all depended on me. Thank God, I could not bring myself to do it. It would have been a massacre, a bloodbath. I refused.

[Question] Who else participated in the meeting?

[Karpukhin] Bosov, Korsak, Grachev, and other generals. I wanted to consult with somebody, but I knew that then I simply could not leave this place. Russian KGB Chairman Ivanenko called me. He said: "Victor, do not get into this business." I told him I had no intention to. At the base, I gathered all of ours and said: "This is madness... We will not take part in it. I do not believe any one of these eight." I was insisting on a meeting with Kryuchkov. He did not receive me. Then I asked to give him a message through his deputy that I refused to storm, cannot slaughter innocent people. Neither any of my people nor units under my command took part in the coup. And we were the only ones who could do it. Now for some reason I am becoming an outsider...

[Question] What do you mean?

[Karpukhin] Bakatin did not receive me, although I went with Shebarshin to see him in the Kremlin. I was removed from the unit command... For what? For not allowing bloodshed to take place? For not capturing the White House? Because I could. Nobody would have stopped us. My subunit possesses an immense might. We should be subordinated only to the president of the country. We are a frightening weapon. I always said that we should not be used for political purposes. Our task is to combat terrorism. We freed hostages, and recaptured the Sukhumi prison when it was overtaken by brutal criminals... We also combat terrorism in the air. It is only when the "amateurs" from OMON got into it—as it was in the Ovechkin case—that there were human casualties.

Now I am sitting at home for the second day... My boys are calling me and saying: If they put you into Butyrka, we will demolish it to the last brick...

I am a healthy guy... I have gone into direct attacks against machine guns 26 times; I fought in Afghanistan, was awarded a title of Hero... and this night I was taking a heart medication...

I am not afraid... I will survive: I can be a driver or a metal worker... But it hurts... I am not looking for pity and am not trying to vindicate myself in anybody's eyes.

All I want is for the people to know that I am an honest man.

Monday, 26 August, 1330

Interview with Alpha subunit commander (since 25 August of this year), Lieutenant Colonel Mikhail Golovatov and deputy commander Lieutenant Colonel Sergey Goncharov by Yuri Shchekochikhin.

[Shchekochikhin] When did you learn that a putsch is being prepared?

[Goncharov] On Sunday the 18th, two Alpha squads had been raised on an emergency with this, to put it mildly, formulation of the task: to fly to the Transcaucasus to free soldiers taken hostage.

[Shchekochikhin] That is, someone deceived you?

[Goncharov] Yes... This was only an excuse to call up all the members of the special subunit. The full complement was called up afterwards.

[Shchekochikhin] What about you—how did you learn about it?

[Golovatov] At that time I was deputy commander. I had the day off from the 18th to 19th. I was called back to work on the 19th by 1500.

[Shchekochikhin] How did you learn about the events, and how did you feel when you learned what had happened?

[Golovatov] At first I did not believe, but then the radio started to broadcast at certain intervals Decree No.1, Decree No.2, and Decree No.3, and I realized that a military coup had taken place. I did not have any doubts that it was illegitimate. As it turned out later, I was not alone in thinking that way.

[Shchekochikhin] Sergey Aleksandrovich, you were the first one to arrive at work. What did you find?

[Goncharov] On the morning of the 19th our commander was constantly at the State Security Committee, apparently receiving some directives from the leadership in regard to using us directly in the preparation of the operation at the White House.

[Shchekochikhin] When did you learn that you were slated to storm the White House?

[Goncharov] At 1730.

[Shchekochikhin] What about you, Mikhail Vasilyevich?

[Golovatov] Yes, we were called to Karpukhin's office simultaneously and were informed of our task. The assault was planned for 0300. The assault on the White House.

[Shchekochikhin] What was your first reaction?

[Goncharov] I can quote verbatim the commander's words when we asked whose order it was. "The government order"—he repeated it twice: "the government order." No specific names or even the GKChP [State Committee on the State of Emergency] were mentioned. Only—the government order.

[Shchekochikhin] I can imagine you standing in that office, listening to this order, and understanding what it was about!

[Goncharov] This we understood right away, as soon as we received the order. We already felt that something terrible was being planned and that they wanted to do all of it by our hands. Not only we, the subunit commanders, sensed the illegality of this order, but also all members, from junior officer to commander.

[Shchekochikhin] Who was the first to refuse to carry out orders—you or your subordinates?

[Goncharov] Mikhail Vasilyevich and I nudged each other, looked at each other, and said: We are not going to carry out this order. After that, we dismissed our subordinate officers and told them: Gather all personnel of your squads, inform each member of the order, and ask the opinion of each member—from the newcomers to old hands—what should be done in this situation.

[Shchekochikhin] It seems to me, this happened at Alpha for the first time?

[Goncharov] Yes. Literally a few minutes passed. We all gathered in the commander's office. Mikhail Vasilyevich and I got every commander to stand up and asked first his personal opinion: Will he carry out this order? All squad commanders said without hesitation that this order is illegal and anticonstitutional, and the entire personnel declared (I want to repeat these words as they were, verbatim, once again): "We are not going there to kill people." Golovatov and I replied: We are not going to lead you there, either. After that, the people understood that they would not be making an operational sortie. Mikhail Vasilyevich ordered them to disarm but to stay at work, not to leave the territory of our base.

[Shchekochikhin] Tell me, is there another similar group in the USSR that could have attacked you for your refusal to obey orders?

[Goncharov] I can tell you from my experience that nobody, except large military formations, is able to oppose our group.

[Shchekochikhin] That is, the junta found itself without its main hands? Let us assume you followed the order—how long would it take to overtake the White House?

[Goncharov] We could take over the White House in 15 to 30 minutes, but—it is frightening even to talk about it—what kind of losses there would have been on the side of the defenders.

[Golovatov] I can add that we would have entered the building, of course, but we would not have left. Not because all of us would perish, but because it would have been impossible to leave. And see everything we had done.

[Shchekochikhin] How did the negotiations with you start, who conducted them and how did they proceed?

[Golovatov] Negotiations? In what sense?

[Shchekochikhin] Well, to force you to comply?

[Golovatov] There was pressure from the leadership to the last moment: It needs to be stormed. Most interesting, though: Even when one of the officers stopped by our office—we were conducting a meeting there—and told us that EKHO MOSKVY radio station reported that the assault is set for 0300 and home guard brigades are being formed, we still did not receive the "as you were" command.

[Shchekochikhin] Tell me: We learned—or perhaps these were just rumors—that you had been moved closer to the White House...

[Golovatov] I can state with full responsibility: All of us remained at the base; not one vehicle, not one armed person went outside the base perimeter from 19 August to 22 August.

[Shchekochikhin] Has anybody from the KGB top leadership tried to put pressure on you? Kryuchkov personally? Or Grushko?

[Goncharov] On me, at least—nobody.

[Shchekochikhin] And what about you, Mikhail Vasilyevich?

[Golovatov] No member of the committee leadership came to the subunit.

[Shchekochikhin] Tell me, in the past, did you have a concern that Alpha—a group for combating terrorism—was forced to participate in political games? I refer to the events in the Baltics, among others.

[Goncharov] We are military people, and everybody who has served in the army knows what an order means. Now we all understood that there is such a thing as illegal and anticonstitutional orders. The members of the special subunit refused to carry out these orders. We realized that we were taking a considerable risk, that Mikhail

Vasilyevich and I could be dismissed and court-martialed, or, even worse, that our group could be disbanded. This did not keep our guys from standing firm to the end.

[Shchekochikhin] Mikhail Vasilyevich, I am now surprised to hear something else: that not only the Alpha group, but many of the KGB officers took rather coldly the orders of their boss Kryuchkov. James Carni, American journalist from TIME magazine, told me that when he was interviewing a tank crew in the center of Moscow on 19 (!) August, a man came over to him, introduced himself as a state security officer, showed his identification, and said: "Do not think that all of us, KGB officers, support what is happening today." What is the explanation? That Kryuchkov is unpopular as a leader?

[Goncharov] It seems to us that in the coup that had taken place in our country nobody asked the opinion of KGB officers. They are used to issuing commands and use our hands to do things for them without being interested in what we think about them and their doings.

[Golovatov] I can add that rank-and-file officers and their moods were not part of the putschists calculations.

[Shchekochikhin] What if the military started to storm the White House: Would Alpha group go help its defenders? Did you discuss this among yourselves that night?

[Golovatov] Somehow, we were certain that without us, force would not be used.

[Goncharov] Our special subunit, in putschists' calculations, was the force that would break the defenders' resistance and find Russian President Boris Yeltsin—it is frightening to say what was proposed for us to do.

[Shchekochikhin] What was proposed for you to do?

[Goncharov] Apparently to capture—that is the best outcome—Boris Nikolayevich. But now this time is behind us, and we believe that, frankly speaking, we simply did not start a civil war. We realized our assault meant a collapse of the Union, a collapse of the entire country—perhaps, in the eyes of the entire world.

[Shchekochikhin] Did you have any specific directives? Or just a general task? Did you have the White House floor plan?

[Golovatov] We only knew where Yeltsin's reception room was; we were informed that it was on the fifth floor, that he was there surrounded by personal bodyguards, and that he was ready to lead the defense of the White House and repel the attackers. It is assumed that we can get our bearings in any situation in a matter of two or three minutes, and start carrying out the combat task.

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