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TACTICAL NUCLEAR CAPABILITIES OF WARSAW PACT GROUND FORCES IN THE REDUCTION AREA

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Tactical Nuclear Capabilities of Warsaw Pact Ground Forces in the Reduction Area

Introduction

This report was prepared by the Central Intelligence Agency in partial response to the White House memorandum of 25 September 1972 requesting additional work in preparation for initial MBFR discussions. It addresses Dr. Kissinger's questions on Warsaw Pact tactical nuclear missile capabilities in East Germany, Poland, Czechoslovakia, and Hungary--the probable area of reduction to be considered in the MBFR discussions.

Soviet planning for the contingency of nuclear warfare in Europe is not limited to tactical weapons, but includes the entire nuclear force--strategic as well as tactical. For this reason, this paper includes a discussion of Soviet nuclear doctrine governing the relationship between the ground campaign and the plan for the use of tactical and strategic nuclear weapons.

The paper also discusses the types of tactical missiles in use by the Warsaw Pact, Pact concepts for tactical missile employment, the numbers of launchers in the probable reduction area, and the forward storage of tactical nuclear warheads.

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Warsaw Pact Nuclear Doctrine

The Soviet military planners usually begin with the assumption that war in Europe would be started by NATO. They further assume that the Warsaw Pact has superior conventional forces. Consequently, they believe that, although a war is likely to begin without the use of nuclear weapons, NATO would not be able to achieve its objectives, or even hold its own, with just conventional firepower. They conclude that after only a limited period--a few days--NATO would be forced to resort to the use of nuclear weapons to halt a Pact incursion into Western Europe.

Rejecting NATO's concept of "flexible response," the Soviets apparently do not plan to follow a series of controlled transitional steps from conventional warfare, through nuclear weapons of increasingly greater numbers or yield, to general nuclear war. They believe that NATO does not intend to restrict a European conflict to tactical nuclear weapons only, and that a limited response by them would only give the West the opportunity to deliver the first massive and decisive nuclear strike. The Soviets plan, therefore, that the initial Pact nuclear strike would include Soviet strategic nuclear forces based in the USSR as well as forward-based tactical systems.

Pact classified military writings emphasize the critical importance of the timing of the changeover from conventional to nuclear warfare. One of the main precepts since at least 1967 has been the preemption of NATO in the use of nuclear weapons. nuclear weapons were to be used "in case of a clear, direct threat of their use by the West." There is, however, no good evidence of what the Soviets consider to be the precise criteria for determining that such a threat exists.

The decision to use nuclear weapons would be made at the highest Soviet political level. The first salvo by the Strategic Rocket Forces is to be

the signal for nuclear strikes by all other forces and weapons. The front* commanders are responsible for planning the strikes of the tactical nuclear weapons subordinate to them. Following the initial strike, authority to fire remaining tactical nuclear weapons may be delegated by the front to army or division commanders.

[redacted] documents indicate that the initial nuclear strike will employ--in addition to the strategic missiles, medium bombers, and submarine-launched missiles--about 30 percent of the tactical nuclear missiles and bombs available to the forces in the forward area. Analysis of several documents suggests that Soviet nuclear doctrine allocates 900 to 1,200 tactical nuclear warheads and bombs to the ground forces and tactical air forces intended for use against NATO's Central Region. Of these, some 300 to 400 would be used in the initial massive strike to supplement the approximately 600 strategic weapons strikes planned in the theater.

The nuclear forces available to the Pact provide a limited capability to wage nuclear warfare on a scale short of theater nuclear war. These forces consist of tactical-range rockets and missiles, and nuclear weapons for air delivery. However, these forces lack nuclear tube artillery and subkiloton warheads. For this reason, the Soviets do not now have the capability for graduated or flexible response to any NATO nuclear initiative at a low level --for example, with the use of atomic demolition munitions or low-yield nuclear artillery projectiles. Further, Pact doctrinal emphasis on the massive use of nuclear weapons, and the absence of a demonstrated Pact interest in the concept of damage limitation, seem to exclude the possibility that the Soviets would initiate the use of nuclear weapons at lesser levels. In recent years there have been indications

** The front is the Warsaw Pact's highest wartime field headquarters for the joint operational control of theater forces.*

that the Soviets are taking a closer look at the concept of flexible response and, of course, political leaders have the option of authorizing only a limited strike on specific targets with selected weapons. There is, however, no evidence that military doctrine and planning have been modified for any contingency other than that in which any use of nuclear weapons in Europe will quickly become theaterwide nuclear war.

The Soviets are continuing the development of their tactical nuclear capabilities. Changes are being made which will provide tactical rocket and missile units with greater mobility, firepower, and range. Such changes can reasonably be interpreted as intended to support the established Soviet nuclear doctrine which calls for the targeting of tactical weapons to supplement the initial strikes of strategic weapons. They probably also are intended to ensure that breakthroughs are exploited by Pact armored forces and, particularly, to aid in the destruction of NATO's air defenses and tactical nuclear capability.

If the Soviets were to accept a more flexible nuclear doctrine which envisaged limiting nuclear war to the use of tactical weapons, they might introduce nuclear tube artillery and subkiloton warheads for tactical missiles. Such weapons would give the Pact the flexibility to engage in nuclear war at lower levels of violence and destruction.

Tactical Nuclear Rockets and Missiles

Scud

All Soviet and probably all East European tactical missile units are believed to be equipped with the current version of the Scud missile--the Scud-B. The Scud-B can deliver a nuclear warhead with a yield of from [redacted] to a range of about 160 nm. Most of the Soviet Scud units have wheeled transporter-

erector-launchers (TELs). The wheeled TEL provides greater mobility and speed than the older tracked version, particularly in Europe where there is a well-developed road network. Recent evidence suggests that the East European units also are beginning to replace their older tracked TELs with wheeled versions.

The normal Pact tactical missile unit is a brigade, and one brigade is generally allocated to each field army, and at least two, possibly three brigades are subordinate to the headquarters of the Group of Soviet Forces, Germany (GSFG). Most brigades have 9 launchers, although those subordinate to GSFG headquarters have 12.

FROG

A free-flight rocket family, designated FROG by NATO, has been a standard item in the Soviet army since the late Fifties, and was introduced into the East European forces of the Warsaw Pact in the early Sixties. All FROG units in the reduction area probably are equipped with the newest version, the FROG-7. The FROG-7 is estimated to be able to deliver a warhead with a yield of from [redacted] to a range of 37 nm. Evidence obtained within the past year suggests that some of the FROGs with the Soviet forces in East Germany have been modified to increase their range, possibly to 47 nm.

One FROG battalion is organic to each line division. The Soviet FROG battalions in the reduction area are all believed to have four launchers each. East European FROG battalions generally have three launchers, although some may have been equipped with four.

Tube Artillery

In recent years there has been a continuing concern that the Soviets may have issued nuclear rounds to their tube artillery. There is no persuasive evidence that they have done so. Pact planning documents discuss in great detail the employment of nuclear

missiles and bombs, but there has been no mention of nuclear artillery. It is estimated that small nuclear weapons are within the capabilities of nuclear technology in the USSR, and the Soviets probably have researched the development and production of such rounds.

Shaddock and Scaleboard

Two other Soviet tactical missiles systems exist, neither of which has been observed in Eastern Europe. The Shaddock, a cruise missile with a range of 300 nm, was first observed in the USSR in 1961. Only a few operational Shaddock units have been seen since, however, suggesting that the missile was not entirely successful.

The Scaleboard, a mobile ballistic missile with a range of 500 nm, was first seen in 1967. It is carried on an eight-wheeled TEL similar to the Scud TEL. The Scaleboard has been identified in increasing numbers in ground force installations in the western USSR. It probably is slated for movement with reinforcing units to the forward area, but the Soviets' deployment goals for the Scaleboard are unknown. It probably is under direct control of the front commanders.

Concepts for Use of Tactical Nuclear Rockets and Missiles

The Soviet concept does not envisage planning the initial nuclear fires primarily for support of the ground maneuver plan. Conversely, the maneuver plan is designed to exploit the effects of the nuclear strike and to ensure the occupation of key areas of enemy territory before NATO can recover from the initial blow.

NATO's means of nuclear delivery--including tactical missiles, nuclear artillery, airfields with

nuclear-capable aircraft, and nuclear depots--are considered by the Pact to be the highest priority targets for the initial nuclear strike. Other targets include air defense missiles, troop concentrations, other airfields, command posts and headquarters, and communications facilities.

Both East European and Soviet tactical missile units are to participate in the initial strike if ready. There is no indication, however, of when the Soviets would release nuclear weapons to the East European forces, or how the Soviets would control their use once they were released. The East European nuclear forces are not permitted access to nuclear warheads during peacetime.

Pact documents indicate that FROG launchers would be deployed between 8 and 11 nm back from the actual battle zone, while Scud launchers would be kept between 16 and 32 nm to the rear. This would permit FROGs to make strikes of up to about 30 nm into the battle zone, while Scuds could strike as deeply as 145 nm. There is no information on the operational concepts for use of the Scaleboard. The land-based strategic missiles from the USSR and medium bombers would be responsible for nuclear strikes beyond tactical missile range.

Deployment of Tactical Missiles in the Reduction Area

The tabulation at right summarizes the number of tactical missile launchers of each type which are currently estimated to be located in the reduction area.

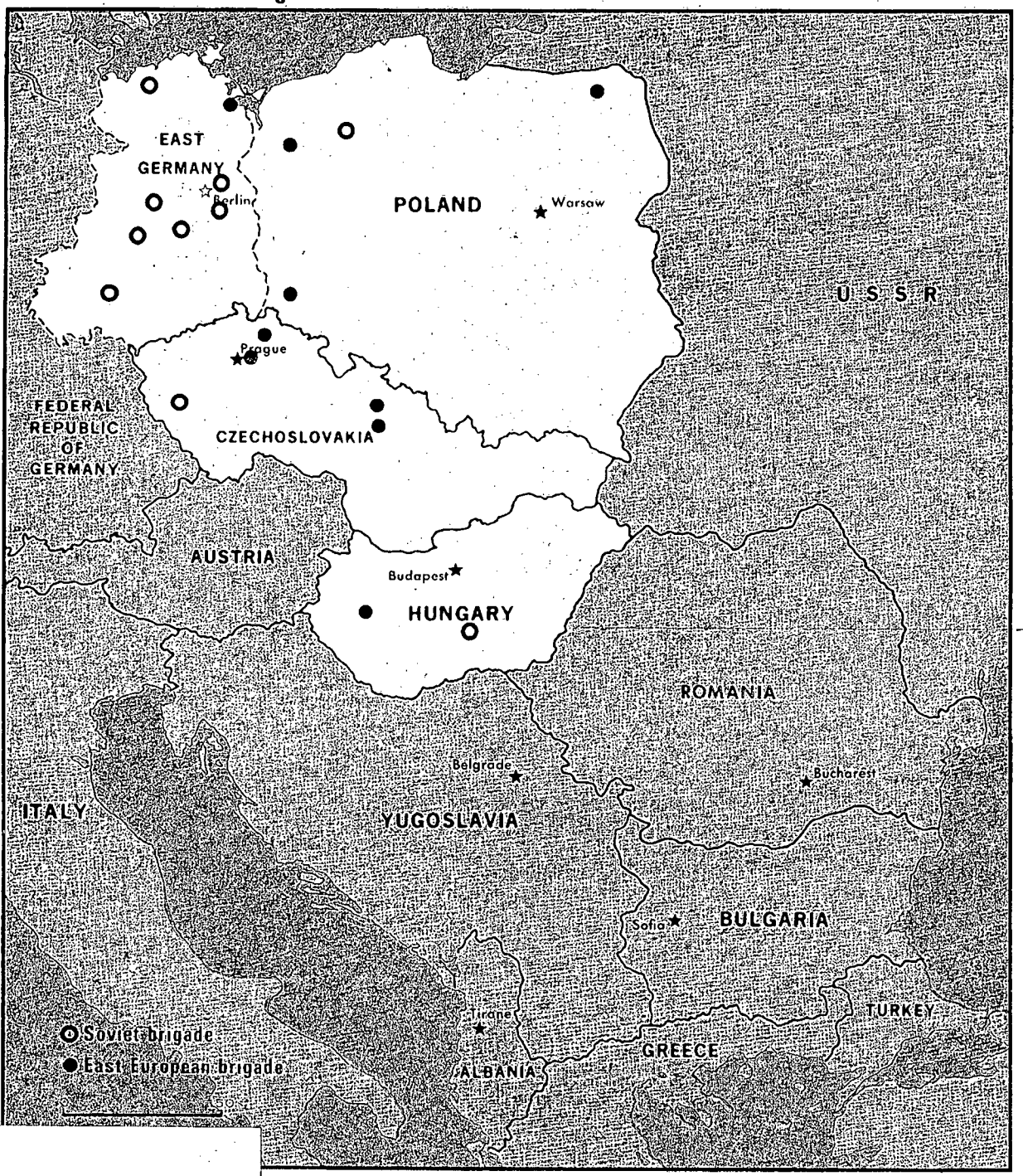
The ranges in the numbers of FROG launchers in the East European forces reflect the lack of data on the number of launchers assigned to divisions whose FROG units have not been located.

	Scuds	FROGs	Total
In East Germany:			
Soviet	69-81	80	149-161
East German	9	24	33
In Poland:			
Soviet	9	8	17
Polish	27	39-52	66-79
In Czechoslovakia:			
Soviet	9	20	29
Czechoslovak	27-36	30-40	57-76
In Hungary:			
Soviet	9	16	25
Hungarian	9	18-24	27-33
Totals:			
Soviet	96-108	124	220-232
East European	72-81	111-140	183-221
Total	168-189	235-264	403-453

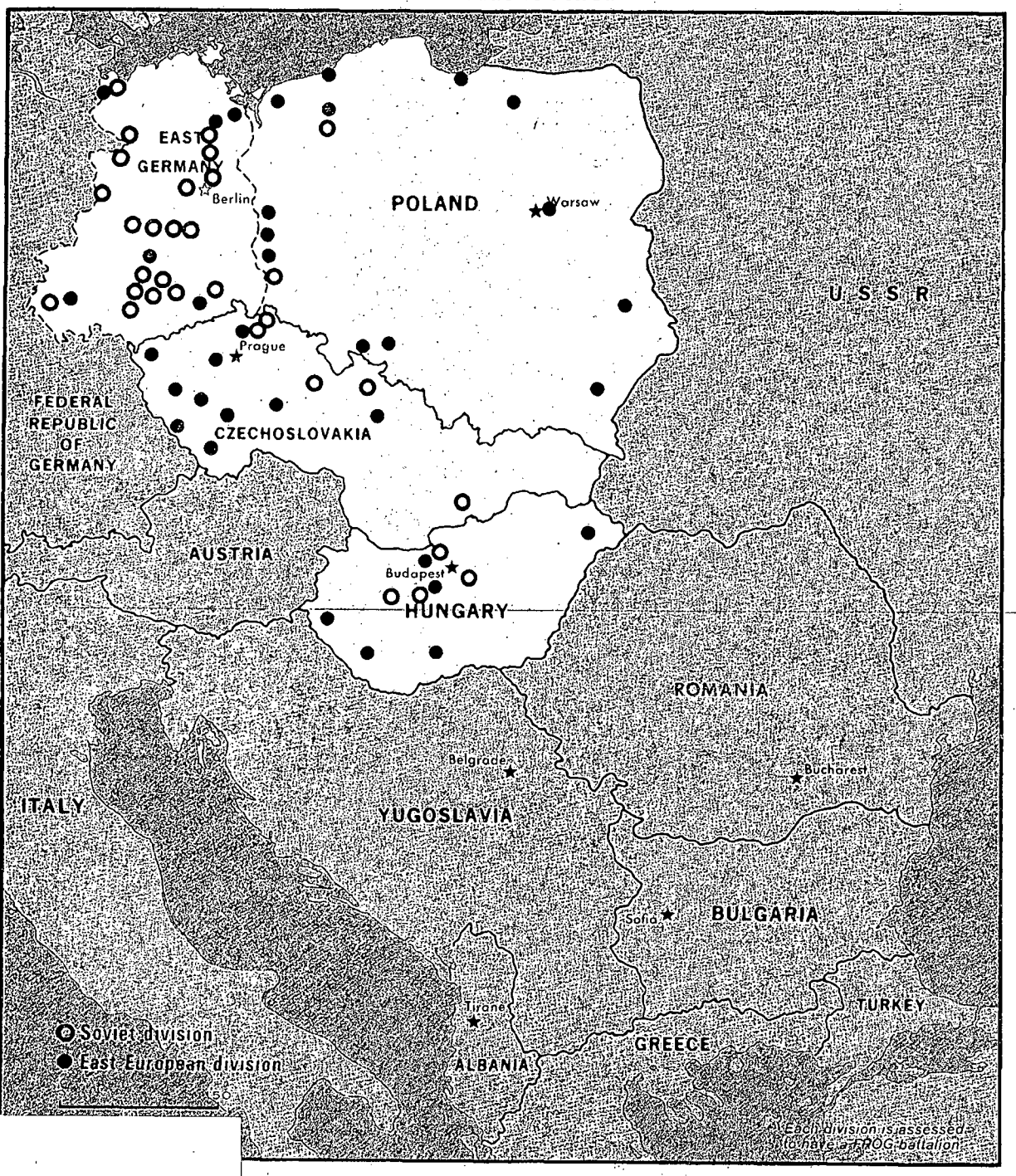
The map on page 10 shows the estimated current deployment of Scud tactical missiles in the four countries considered to be the probable reduction area. Of the four Scud brigades subordinate to the Czechoslovak forces, one (included on the map) is a training brigade. There is evidence that in the event of war, this brigade would be mobilized to combat status. [redacted] another Scud brigade, subordinate to headquarters GSFG, may exist in the area south of Berlin. This brigade has not been located, however, and is not shown on the map.

Although information on the deployment of Scud brigades is fairly good, some of the FROG battalions

Warsaw Pact Scud Brigades in the Reduction Area



Warsaw Pact Ground Divisions in the Reduction Area



organic to divisions have not been specifically located. Information from many sources indicates, however, that each division is equipped with a FROG battalion. The map on page 11 shows the locations of all ground force divisions in the area as an indicator of FROG deployment.

Tactical Nuclear Warhead Storage and Support

In Eastern Europe, 12 two-bunker storage sites are believed to be for the storage of nuclear warheads for tactical rockets and missiles. There are 9 in the reduction area--2 in East Germany, 3 each in Poland and Czechoslovakia, and one in Hungary. The locations of the sites suggest that each is intended to store the nuclear warheads for the Scud brigade and the several FROG battalions in an army area. In some army areas, however, particularly in East Germany, no sites have been found, although more may be discovered as new evidence becomes available.

There is activity at all of the sites and, where the nationality of site personnel has been determined, Soviet troops rather than East European troops have consistently been identified. The continual activity and manning, heavy security, complexity and permanence of the construction, and the presence of nuclear warhead vans at several of the sites imply that the sites are currently being used for the storage of nuclear warheads, and are not merely intended to be future staging points for warheads to be moved up in the event of hostilities.

Although there is no information on Soviet practices in nuclear weapons storage, [redacted] analysis [redacted] indicates that each two-bunker site probably could hold about 100 warheads for FROG and Scud missiles. If less space is devoted to nonstorage functions, such as environmental control equipment and maintenance shops, than is presently estimated, the capacity could be somewhat higher.

Warsaw Pact documents suggest a requirement for some 300 to 400 tactical nuclear warheads and bombs to be allocated for the first strike against NATO's Central Region. About 75 to 80 percent of these would be tactical rocket and missile warheads. Thus the 9 storage sites in the reduction area--with a capacity of at least 900 warheads--would be more than sufficient to support the initial strike.

All tactical missiles are capable of carrying chemical as well as nuclear warheads

Evidence indicates, however, that the initial massive strike is likely to be entirely nuclear. No storage sites for chemical warheads have been located in Eastern Europe, and there is no evidence that any of the nuclear storage sites are used to store chemical warheads.

To prepare tactical missiles for firing, warheads and missiles probably would be transported from storage sites to the launch units by Mobile Technical Repair Bases (PRTBs) which prepare warheads and mate them to the missiles. These units would move up behind the forces as the battle evolved. There is little information on the procedures for transporting the warheads, or how the problem of the increasing distance from the storage sites to the battle zone would be handled.

Five other nuclear storage sites, all located next to Soviet airfields, have been found in Eastern Europe. These probably are intended solely to serve the nuclear-capable aircraft stationed at or staged from these airfields. Some tactical missile warheads may also be stored at these sites, but there is no direct evidence to support this proposition. However, if this were the case, the distance between certain launch units and the 12 other storage sites would be explained.