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**CENTRAL INTELLIGENCE AGENCY**  
WASHINGTON 25, D. C.

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30 JUL 1962

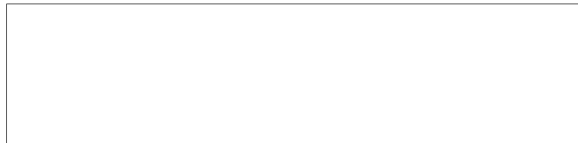
MEMORANDUM FOR: The Director of Central Intelligence

SUBJECT : MILITARY THOUGHT (SECRET): "Engineer Preparation of Siting Areas for Missile Large Units and Units", by Colonel Ye. Kolibernov and Captain L. Yefimochkin

1. Enclosed is a verbatim translation of an article from the SECRET Collection of Articles of the Journal "Military Thought" published by the Ministry of Defense, USSR, and distributed down to the level of division commander.

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

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



*Richard Helms*

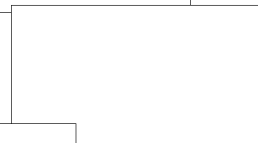
Richard Helms  
Deputy Director (Plans)

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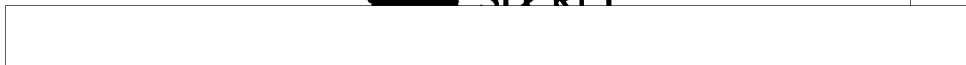
Enclosure



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Original: The Director of Central Intelligence

cc: The Director of Intelligence and Research,  
Department of State

The Director, Defense Intelligence Agency

The Director for Intelligence,  
The Joint Staff

The Assistant Chief of Staff for Intelligence,  
Department of the Army

The Director of Naval Intelligence  
Department of the Navy

The Assistant Chief of Staff, Intelligence  
U. S. Air Force

The Director, National Security Agency

Director, Division of Intelligence  
Atomic Energy Commission

National Indications Center

Chairman, Guided Missiles and Astronautics  
Intelligence Committee

Deputy Director for Research

Deputy Director for Intelligence

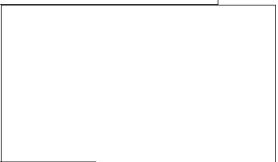
Assistant Director for National Estimates

Assistant Director for Current Intelligence

Assistant Director for Research and Reports

Assistant Director for Scientific Intelligence

Director, National Photographic Interpretation Center



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COUNTRY : USSR

SUBJECT : MILITARY THOUGHT (SECRET): "Engineer Preparation of Siting Areas for Missile Large Units and Units", by Colonel Ye. Kolibernov and Captain L. Yefimochkin

DATE OF INFO : August 1961

APPRAISAL OF CONTENT : Documentary

SOURCE : A reliable source (B).

Following is a verbatim translation of an article entitled "Engineer Preparation of Siting Areas for Missile Large Units and Units", which was written by Colonel Ye. Kolibernov and Captain L. Yefimochkin.

This article appeared in Issue 5(60) of 1961 of a special version of the Soviet journal Military Thought which is classified SECRET by the Soviets and is published irregularly. Issue 5(60) was sent to press on 25 August 1961.

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Comment: Military Thought is published by the USSR Ministry of Defense in three versions, classified RESTRICTED, SECRET, and TOP SECRET. The RESTRICTED version has been issued monthly since 1937, while the other two versions are issued irregularly. The TOP SECRET version was initiated in early 1960. By the end of 1961, 61 issues of the SECRET version had been published, 6 of them during 1961.

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Engineer Preparation of Siting Areas  
for Missile Large Units and Units

by

Colonel Ye. Kolibernov

and

Captain L. Yefimochkin

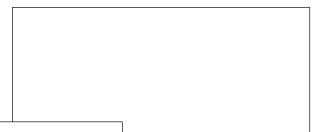
It is known that the engineer preparation of siting areas for missile large units and units is the basic type of their antinuclear defense.

Several exercises which have been conducted allow some conclusions to be drawn about organizing engineer preparations of siting areas of a brigade and battalion of operational-tactical missiles. The periods of time required for preparing these areas are very short and are determined by the time spent by the missile brigade (battalion) in the previous siting area. Considering the average daily speed of an offensive, the movement of a missile brigade which is carried out over a distance of 80 to 120 km and primarily at night, will occur, as a rule, once in a 24-hour period. Consequently, this leaves no more than 14 to 16 hours for the engineer preparation of a siting area for a missile brigade by the forces of a combat engineer company, providing that the area selected lends itself readily to camouflage, thereby permitting engineer work to be carried out during daylight hours. Even less time is available if the engineer work is to be carried out in an open area.



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The primary siting area of the brigade will be prepared by the organic field engineer company which has powerful site-preparation (pozitsionnaya mashina) and road building machinery. There is no need to bring in the site-preparation units (pozitsionnaya chast) of the army or front for this purpose.

In several articles in the Collections, the volume of earth-moving operations (zemlyanaya rabota) in the siting area of a missile brigade was said to be 37,000 and 60,000m<sup>3</sup>. We shall cite somewhat different figures. First of all, one must determine the nature of the elements of the battle formation in which the work is being done and the volume of work. In our view, in a siting area for a missile battalion it is necessary to prepare fully, from an engineer standpoint, waiting positions, the control point, positions for the technical support platoon (reloading point), and the meteorological post. Only one launch site is prepared in the battalion -- for the duty battery which will immediately occupy it when the battalion arrives in the siting area. At the remaining launch sites, only trenches for personnel are prepared, and, if necessary, launching pads are leveled. Cross-country routes from the waiting position to the launch sites are laid and marked. In our opinion, it is inadvisable to prepare cover for equipment at the launch sites because this clearly reveals the overall battle formation; besides, it is known that all this equipment is brought to the launch site only to launch a missile and is there for a very short time only.

The volume of earth-moving operations in the battalion's siting area with the indicated number of objectives is reduced by 3,500 to 4,000m<sup>3</sup>, i.e., by 30 to 40 percent. In preparing a check point and a joint fueling and assembly point (punkt zapravki i montazha), the volume of earth-moving

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operations at the site of a technical battery is reduced up to 3,000 to 3,500m<sup>3</sup>; and at the brigade control point and at the site of the meteorological post, up to 2,500 to 3,000m<sup>3</sup>.

First of all, trenches should be dug, and then shelters of a light type prepared for the personnel of missile subunits. On the basis of the minimum number of shelters needed and the actual amount of materials which can be supplied, it seems to us that for the personnel of a brigade it is sufficient to prepare 30 to 35 shelters of a light type (without counting shelters made from pieces of corrugated steel sheets (KVS-U) at control points). We consider it is sufficient to have shelters of a light type for one-third of the personnel to provide them a place to rest lying down. These same shelters, however, may be used as protection for all the personnel at the time of a nuclear burst. To set them up in woodless areas, cloth frame construction (karkasno-tkanevoye sooruzheniye) and curvilinear paper bags (krivolineynyy bumazhnyy meshok) should be used; and they can be moved on the transport of the subunits together with an entrance arrangement and a protective door. In heavily wooded areas, shelters should be made from forest materials and should be of unnotched construction.

Using eight excavating machines (kotlovannaya mashina) the field engineer company of a brigade digs 1200m<sup>3</sup> of soil an hour. The practical production of an MDK-2 excavating machine should be considered as 200m<sup>3</sup> an hour, and not 400m<sup>3</sup> as is indicated in some articles. Consequently, in 10 to 12 hours, all the earth-moving operations in the primary siting area of a brigade will be completed. As for the brigade's alternate area, it is advisable to ready its engineer preparation by using the forces of trench-digging units of a front or army. It is not possible to employ the

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brigade's field engineer company to prepare the alternate siting area because in the time allotted it can carry out the work only in the primary siting area and then must move on to a new area. Moreover, the alternate area must be prepared simultaneously with the primary one, because it may have to be occupied at any time and even before the brigade arrives in the primary area.

The inclusion of new excavating machinery with a production capacity of up to 1000m<sup>3</sup> an hour in the T/O&E of a field engineer company will make it possible for the work to be done by the forces of the field engineer company simultaneously in the primary and alternate areas.

We do not agree with those authors who propose using the BAT bulldozer to dig foundations (otryvka kotlovanov) and who compare their productivity with that of excavators and tractor bulldozers. The BAT is a road-building machine and a machine for laying railroads and, therefore, can be used to dig foundations only where the soil is loose, and even then it is inefficient (its cut is too broad). It is impossible to use the BAT in average soils, much less in hard soils; experience has shown that even with devices to change the shape of the cutting blade, the most experienced operators are not able to dig foundations in average and hard soils, or in loose but frozen soils with a frozen depth of more than 30 to 40 cm. In these cases, the productivity declines sharply, and the load on the machine increases. It is useful to employ the BAT for filling in blindages and shelters, to lay out pads, etc.

If the field engineer company has seven BATs, it is completely equipped to lay roads within the brigade's siting area. Roads between siting areas, however, must be prepared by engineer units from the army or front.

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In our view, it is advisable that the engineer subunits of missile units have their own bridge builders (mostoukladchik) (MTU). This would make it possible for a brigade field engineer company to lay roads for maneuvers without the aid of engineer troops of a front, and also to ensure the movement of a missile brigade along the roads prepared by engineer units of an army or front in the event these roads are destroyed in individual sectors during the operation.

Camouflaging the disposition of missile units presents great difficulties. The great length of the equipment of missile units and the cover which it requires, complicate the use of artificial cover. In all instances, it is necessary to try to find natural cover, even if this changes somewhat the norms established for distances between elements of a battle formation. In our opinion, it is useful to exchange experiences about the troop and operational camouflage of missile units on the pages of the Collection.

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