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CENTRAL INTELLIGENCE AGENCY  
WASHINGTON, D.C. 20505

17 August 1978

MEMORANDUM FOR: The Director of Central Intelligence  
FROM : John N. McMahon  
Deputy Director for Operations  
SUBJECT : MILITARY THOUGHT (USSR): The Subject of  
Organizing Meteorological Support for  
Military District Forces

1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal 'Military Thought'. This article discusses the establishment of a centralized and unified hydrometeorological service in an interior military district to provide peacetime and wartime meteorological service, primarily for the preparation of radiation situation assessments and for mobilization planning. It describes the experience of the North Caucasus Military District in establishing such a service through the integration of the ground forces, air forces, air defense, and civil meteorological facilities available. The necessary communications and also other additional wartime needs are presented. This article appeared in Issue No. 2 (75) for 1965.

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

JOHN N. MCMAHON

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## Intelligence Information Special Report

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COUNTRY USSR

DATE OF INFO. Mid-1965

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DATE 17 August 1978

SUBJECT

MILITARY THOUGHT (USSR): The Subject of Organizing Meteorological Support for Military District Forces

SOURCE Documentary

Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 2 (75) for 1965 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal 'Military Thought'. The author of this article is Engineer Lieutenant Colonel G. Yanyushkin. This article discusses the establishment of a centralized and unified hydrometeorological service in an interior military district to provide peacetime and wartime meteorological service, primarily for the preparation of radiation situation assessments and for mobilization planning. It describes the experience of the North Caucasus Military District in establishing such a service through the integration of the ground forces, air forces, air defense, and civil meteorological facilities available. The necessary communications and also other additional wartime needs are presented.

End of Summary

[REDACTED] Comment:

The SECRET version of Military Thought was published three times annually and was distributed down to the level of division commander. It reportedly ceased publication at the end of 1970. [REDACTED]

[REDACTED] the article to which it refers is unavailable.

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The Subject of Organizing Meteorological Support  
for Military District Forces

by

Engineer Lieutenant Colonel G. YANYUSHKIN

Engineer Colonel L. ULANOV's\* article deals with the main problems of hydrometeorological support for a front offensive operation and, in our view, outlines the only correct method of achieving this: the establishment of a unified front hydrometeorological service capable of independently accomplishing the tasks confronting it.

Only such a unified service in a military district, group of forces, and, from the beginning of a war, in a front, that is based on centralized control of the minimum required number of hydrometeorological subunits of the branch arms and services, will make it possible to support the combat activity of all the large units and units making up the ground forces operational formations and also support the large units and formations from other branches of the Armed Forces that are cooperating with them.

A unified system of observing, collecting, and exchanging meteorological data, particularly atmospheric sounding data, must be established not only on the scale of the military district or front, but also on the scale of the Armed Forces. In addition, this system should be available in the entire territory of our country and in the countries of the socialist camp.

In the Armed Forces the isolation of the hydrometeorological service, the departmental principle of organizing it, and also the absence of a single, fully authorized leadership for it have led to serious difficulties in hydrometeorological support for the ground forces of a military district even in peacetime. Here is a simple example. In accordance with the orders of the Chief Directorate of the Hydrometeorological Service attached to the USSR Council of Ministers, civil aerological stations determine the average wind for the atmospheric layers from 0 - 5, 0 - 7, 0 - 9, 0 - 12, 0 - 16, 0 - 18, 0 - 20, 0 - 22, 0 - 24, and 0 - 28 kilometers deep and transmit the wind's parameters, giving the velocity in meters per

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\* Collection of Articles of the Journal 'Military Thought', 1964, No. 3 (73).

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second, via the code SLOY (Layer). But the radio-wind sounding posts of the air force meteorological service calculate the average wind for atmospheric layers from 0 - 6, 0 - 12, 0 - 18, and 0 - 24 kilometers deep, and for inquiries and answers use their code ZENIT-NADIR (Zenith-Nadir) over which average wind parameters for only four layers can be transmitted; velocity is measured in kilometers per hour. In practice this leads to confusion and necessitates the use of two codes and the recalculation of average wind velocity.

Centralization of the hydrometeorological service and a unified system of data observations, collection, and exchange are absolutely necessary even in peacetime. They play an important role in increasing the constant combat readiness of troops in the military districts.

Modern means of attack enable the enemy to deliver surprise, massed missile/nuclear strikes employing ground bursts against troops and rear installations not only in border, but also in interior military districts. This necessitates, in order to maintain the constant combat readiness of each large unit and unit, the assessment of the radiation situation in their garrison locations and in the territory of their military district, and even of the adjoining military districts.

In interior military districts, where troops as a rule are maintained at reduced strength and without organic meteorological service subunits, it is especially necessary to organize centralized meteorological support with forces from the subunits available in the military district. Military commissariats and civil defense staffs, and also troop columns and trains moving through a military district, require similar definite support.

As is shown by the experience of war games and command-staff exercises conducted jointly with the military commissariats and civil defense staffs, a correct and timely assessment of the radiation situation is the basis for coordinated actions during complete mobilization of the troops under conditions of an enemy nuclear attack. On the basis of such an assessment civil defense staffs will be able to warn the population via the broadcasting net, issue orders to take cover in underground shelters or other buildings, organize radiation reconnaissance, determine the time for the population to leave the shelters, evacuate zones with high radiation levels, and carry out other protective measures.

Military commissariats will be able to change their plans and assure the timely arrival in units of personnel and equipment from areas not subjected to radioactive contamination. Large unit commanders will make

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the decision for complete mobilization in a suitable area, indicate to the military commissariats the new reception points for replacements and equipment, and also specify the routes for the movement of units.

For example, at the start of the command-staff exercise VOLCANO (VULKAN), the lack of a unified system of meteorological support led to a situation in which the staffs of formations and large units did not have average wind data for 10 hours after the sounding of the alert; because of this, they were actually not ready to assess the radiation situation.

What are the methods and opportunities of organizing the centralized supply of data on the average wind in the atmospheric layers to the troops of an interior military district?

The staff of the North Caucasus Military District has some experience in this field. Here, all aerological stations of the civil hydrometeorological service available in the military district, and the radio-wind sounding subunits of the district's air forces, air defense forces, and ground forces (a total of 14 aerological stations and posts) were called upon to organize meteorological support for the troops. At its permanent garrison post each large unit of the district receives daily average wind data from two soundings which are transmitted via wire communications using the code SLOY.

For verification, when increased or full combat readiness is implemented and also when troops are put on combat alert, the operations officers on duty in a large unit send inquiries which were prepared in advance, via telegraph or telephone to the meteorological service subunits supporting them. The latter immediately relay all available average wind data. In fact, civil aerological stations transmit average wind data taken at four atmospheric soundings (at 0300, 0900, 1500, and 2100 hours); air force and air defense radio-wind sounding posts transmit twice per day (0300 and 1500). Under similar circumstances the operations officer on duty at a military district staff sends a similar inquiry to all 14 aerological stations and posts and, with the receipt of an answer, has at his disposal data on the average wind above the entire district. Thus, the North Caucasus Military District has established direct communications at the large unit -- aerological station level and at the district staff -- aerological station or post level.

To check the readiness of aerological stations and posts to provide the troops with data from all atmospheric soundings, provisions are made to periodically send inquiries to all the meteorological support subunits.

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Repeated inquiries for the purpose of verification and for troop support during exercises demonstrated that SLOY coded messages reach the addressees by telegraph within half an hour to an hour; with direct telephone communications they arrive within 20 to 30 minutes after an atmospheric sounding is completed. When exercises are conducted in the field, average wind data for specific areas reach the district staff via wire communications and are then transmitted to the exercise area over the radio net of the meteorological service (such a net exists in the North Caucasus Military District) by using the code SLOY. In so doing, the code word SLOY is replaced by the indicator group "00009".

The method examined above for providing the troops of an interior military district with meteorological data is acceptable in peacetime, but, in our opinion, cannot be recommended as a rear services model for wartime for two reasons. First, data are transmitted via wire communications and steady reporting is not guaranteed in event of missile/nuclear strikes against large cities where, as a rule, the main communications centers are concentrated. Second, reporting to the troops is difficult when they go out to concentration areas since military and civil radio-wind sounding stations also leave the cities and will prove to be a considerable distance away from the troops -- at times up to 20 to 50 kilometers away.

In our view, the T/O&E of radio-wind atmospheric sounding stations and posts in peacetime and also the absence of radio communications between them and the staffs of military districts and large units cannot, and must not, be the cause of the unreadiness of troops to assess the radiation situation and to operate under nuclear attack conditions.

With the introduction of increased combat readiness, all stations included in a unified meteorological support network must take an atmospheric sounding every four to six hours. For this reason, it is necessary to have the stations set up at T/O&E strength, which provides for continuous operation and radio-wind atmospheric soundings every four hours. The aerological stations and posts in such a network must have radio means for communication with the military commissariats, civil defense staffs, large units and units, and also with the staffs of military districts.

In our opinion, at the present time the staffs of military districts have the capability of organizing the collection of average wind data from all radio-wind sounding posts and of transmitting the data to the troops via radio without having to allocate supplementary means. To do this, it is necessary to use the cooperation communications between the military district staff and the staffs of the air defense and air forces formations

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and large units, and also the radio net of the oblast, kray and republic military commissariats for communication with the military district staff. In addition, the matter of moving civil aerological stations, military commissariats, and civil defense staffs to the same area must be carried out. It is also advisable to plan the movement of operations groups of the territorial directorates of the hydrometeorological service to the areas into which the staffs of the military districts have moved. As a result, when wire communications are maintained, essential hydrometeorological data will come in through these operations groups.

A problem which deserves attention and requires detailed study is that of allocating, for wind atmospheric soundings, the SON-9 fire control radars of the anti-aircraft regiments of motorized rifle and tank divisions from the moment full combat readiness is implemented, and particularly in those areas where there are no special meteorological posts.

Centralization of the hydrometeorological service and a unified system of data collection and exchange, which are acknowledged as the first step, even at the military district scale, open great possibilities for cooperation between adjacent military districts via the radio nets of the hydrometeorological service and make it possible (when radio data are transmitted in a timely manner and the content and transmission times are determined) to provide not only large units and units in concentration areas with necessary meteorological data, but also all units moving through a military district.

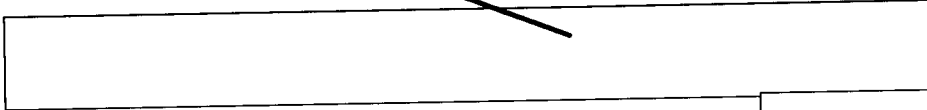
In order to conceal the content of radio messages from enemy reconnaissance and in the interests of mutual understanding, it is necessary to send transmissions in coded form using standardized secret codes and means of indicating the coordinates of the radio-wind sounding stations and posts.

We are convinced that, to maintain the high combat readiness of troops, it is now time to raise the question of organizing the unified control of the hydrometeorological service of the Armed Forces and of establishing a similar service in the military districts and groups of forces so that this service can accomplish the tasks confronting it in peacetime and set up the hydrometeorological subunits in a timely manner for the purpose of supporting troop combat actions under conditions of a complex radiation situation.

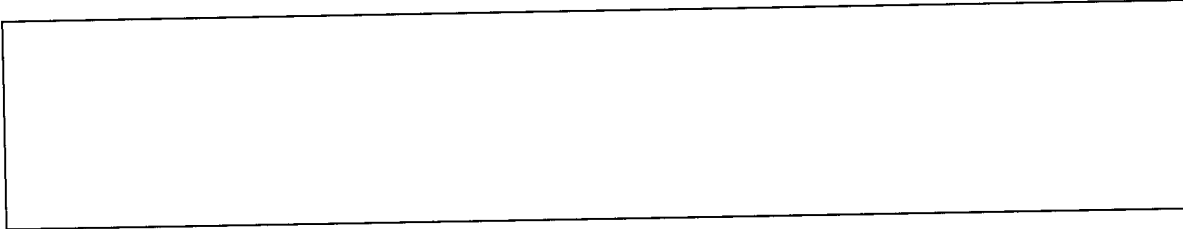
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