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NATIONAL AIR & SPACE INTELLIGENCE CENTER (AF ISR AGENCY)
WRIGHT-PATTERSON AFB OHIO

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OCT 02 2009

John Greenewald, Jr.
[REDACTED]

Dear Mr. Greenewald

This letter is in reference to your Freedom of Information Act (FOIA) request for a copy of the document entitled *Chemical Weapons*, our case number 2009-03143-F.

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Sincerely

A handwritten signature in black ink, appearing to read "M. Hess", is written over the word "Sincerely".

MARK E. HESS, Colonel USAF

Attachment
Requested Document

11 pages

CHEMICAL WEAPONS

FOREIGN TECHNOLOGY DIV WRIGHT-PATTERSON AFB OH

30 MAR 1965

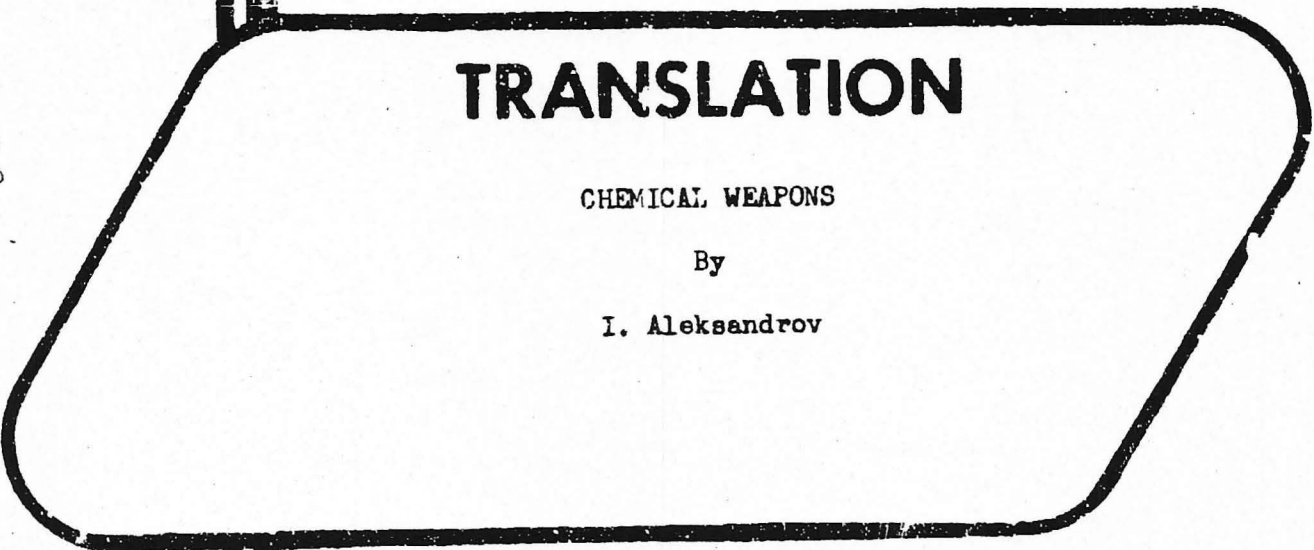
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TRANSLATION

CHEMICAL WEAPONS

By

I. Aleksandrov

FOREIGN TECHNOLOGY DIVISION



AIR FORCE SYSTEMS COMMAND

WRIGHT-PATTERSON AIR FORCE BASE

OHIO

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MAY 3 1965

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UNEDITED ROUGH DRAFT TRANSLATION

CHEMICAL WEAPONS

BY: I. Aleksandrov

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CHEMICAL WEAPONS

I. Aleksandrov

The war plans of the aggressive imperialist circles against the USSR and other socialist countries call for weapons having mass effects. That is, nuclear, chemical, and bacteriological weapons.

The imperialist aggressors place much emphasis on chemical weapons. It is no coincidence that the warmongers have become interested in these weapons. In recent years, scientists, working in the service of capitalism, have developed chemical compounds whose toxicity is tens and hundreds of times greater than that of such poisons as sarin, tabun, and soman. Foreign military specialists believe that chemical weapons are as harmful to the adversary's economy as nuclear weapons, in addition to being more advantageous.

What are the advantages the imperialists see in chemical weapons? According to American data, poison gases do not irreparably damage an adversary's industrial and economic objectives. Thus, production can be resumed without having to rebuild the adversary's industrial sites upon occupying the territory. In addition, a considerable part of the population are saved and can be used in the work force. This weapon is also cheaper, and using it forces the adversary to divert a

large number of people, both in the rear and at the fronts, to care for the injured.

The list of "advantages" of poison gases reveals the essence of the imperialist plans: to annihilate a considerable part of the adversary's population and to seize his industrial, transport, and other objectives with a minimum of force.

It is these goals which have prompted the leading capitalist countries to develop and perfect chemical weapons in the post-war years. The USA, Great Britain, and Canada are carrying out the most intense development of these weapons. These countries exchange their scientific-research information.

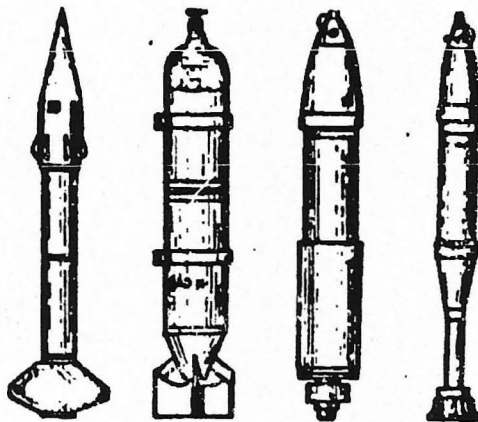
However, it is the USA which is developing and producing most of the chemical weapons. Since the war the USA has particularly developed the poison gases and has industrialized their production.

The reorganized chemical branch of the US Army is entrusted with the preparation of poison, incendiary, and smoke agents.

In addition to tear gas, the US Army has gases causing paralysis, blistering of the skin, suffocation, psycho-chemical reactions, and vomiting.

The peculiarities of contemporary poison gases are: in both the liquid and vapor states they are extremely toxic, act very quickly on the organism of man or animal, and have no characteristic odor by which they can be detected.

The nerve-paralyzing poison gases (the sarin-, tabun-, and soman-type V agents) enter the organism through the skin and respiratory organs. The Americans believe that the best poison gas of this type is sarin. It can be used to contaminate the atmosphere, water supplies, and foodstuffs.



Basic types of chemical ammunition of US Army:
mortar shell, artillery missile, aerial bomb,
unguided rocket (not drawn according to scale).

Sarin is a highly volatile, colorless, odorless liquid. Its vapors are tens of times more toxic than the vapors of hydrocyanic acid. A gas mask is not reliable protection against the vapors of sarin, and the droplets which fall on the skin enter the blood and can cause death. It takes only 0.3 g of liquid sarin on the skin to cause severe poisoning and in 50 out of 100 cases results in death. The lethal poison dosage is obtained after breathing sarin-poisoned air for 10 minutes. About 0.15 milligrams of sarin per 1 kg of body weight is sufficient to cause lethal poisoning.

However, no less toxic is tabun. If its vapor concentration in the atmosphere is 0.25 milligrams per liter of air, then it is lethal for a man to stay in this area for 15 minutes without some sort of protection. According to American data the V agents have a toxicity 100-1000 times greater than the other poison gases of this group.

The skin-blistering poison gases, in the minds of the Americans, can also be used in chemical warfare. The gases having a general poisonous effect (hydrocyanic acid and cyanogen chloride) are used

mostly for contaminating the atmosphere. They remain in a locality from 5 to 20 minutes. If they are released in the atmosphere, they can develop lethal concentrations and destroy living organisms through the respiratory organs. The presence of 0.2 milligrams of hydrocyanic acid or 0.4 milligrams of cyanogen chloride in a liter of air produces lethal poisoning after 10 minutes.

Phosgene is the basic poison gas causing suffocation. This colorless, very volatile liquid can be used only to contaminate the atmosphere. Phosgene affects a man's respiratory organs. It is less toxic than hydrocyanic acid, but possesses the insidious property of accumulating in a man's organism as he breathes air containing a small concentration of its vapors. It results in the death of a man when enough gas is accumulated in his organism.

The psychochemical poison gases are designed for temporarily affecting the psychics of a man. They act on the sense organs, brain and nerve centers. They produce temporary blindness, deafness, psychic disorders, hallucinations, etc. The psychochemical poison gases can be used in the liquid or vapor state. They are very toxic, odorless, and act very quickly on a man's organism.

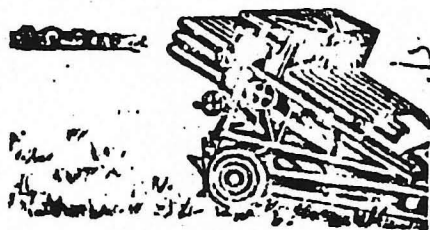
The chemical weapon is delivered to the objective by aircraft, rockets, artillery, etc. Aerial bombs, gas sprayers, warheads of guided missiles, winged missiles, multiple-rocket launchers, mines, artillery, and hand grenades can be equipped with agents and poisonous explosives,

Chemical bombs range from 45 to 450 kg. The smaller bombs are usually equipped with stable poison gases. The bombs are usually placed in the plane's bomb bay or in special racks. The larger bombs are equipped with unstable poison gases. The larger-caliber bombs can produce a highly concentrated gas cloud very quickly. Foreign

data indicate that any bomber, such as the B-52, can, under favorable meteorological conditions, very effectively contaminate an area of about 250 square kilometers. The maximum bomb load of this aircraft is 34 tons, a range up to 10,000 km, and a speed of about 1,000 km/hr.

Fighter-bombers can also be used to deliver the chemical bombs to the targets. Their bomb load is 6-7 and their range 4 times less than the B-52, but they are twice as fast. About 60% of the bomb's weight is the poison gas.

Recently the USA introduced the M-91 rocket launcher into its armament. This rocket launcher can fire 45 115-mm chemical rockets at one time.



M-91 chemical rocket launcher.

Each chemical bomb is designed with a hermetic sealing filled with a poison gas, a firing shell, an explosive, and a fuse. After hitting the ground the bomb explodes, scatters the poison gas over a large area contaminating the surface of the earth and the atmosphere.

The gas-spraying devices contaminate large areas with poison gases as the plane traverses these areas.

It was recently reported that the USA is stock-piling a vast arsenal of chemical aerosol bombs. The USA is believed to have about

130 thousand such bombs. Each is supposedly capable of destroying any living thing within an area of 10 thousand square kilometers.

However, an aerosol chemical bomb is not considered to be the most effective means of annihilating mankind. According to American chemists, a total of 200 kg of bacterial preparation can annihilate from 25 to 75% of a population in an area of 80 thousand square kilometers.

The efforts of all nations are presently centered on opportunely restraining the imperialists and reducing the possibility of launching a death-carrying weapon. All the peoples of the world are attempting to prevent war and thus prevent the aggressors from using nuclear, chemical and bacteriological weapons. The present generation is capable of doing this.

The population can be effectively protected from such a weapon. It encompasses a large complex of measures which are carried out at the institutions and factories: radiation, chemical, and bacteriological reconnaissance, diagnosing the contamination, eliminating, the aftereffects of the weapon, as well as therapeutic-prophylactic measures.

Underground structures are the most reliable protectors of the population from all types of such weapons. Collective shelters equipped with filtration and ventilation will protect the population from chemical and bacteriological weapons. Even holes in the ground, if they have an improvised covering, will protect a man from poison gases which would otherwise fall on the skin and clothing, as well as from bacterial aerosols.

There are other means of protecting oneself from poison gases: gas masks, special clothing, etc. It is necessary to learn when to

use them advantageously.

The active means of protecting ourselves from a chemical weapon are most important. Our country has sufficient means to prevent aggressors from using chemical weapons. The whole world knows how the attempts of the warmongers to penetrate the air space of the USSR and other socialist countries will end. Spy aircraft capable of very high speeds and ceilings will invariably be knocked down by our air defense. As Minister of Defense Marshal of the Soviet Union P. Ya. Malinovskiy said: "Our country has solved the problem of an anti-rocket defense. Thus, we can prevent the warmongers from using chemical weapons."

However, the chemical weapons and the methods of protecting ourselves from them must be investigated so that our cities and villages will not be caught unawares in a surprise attack. The better the population is instructed in the protective measures the more difficult it will be for the warmongers to use them effectively.