# MEMORANDUM TO HOLDERS

SNIE 11/50/37-82

# USE OF TOXINS AND OTHER LETHAL CHEMICALS IN SOUTHEAST ASIA AND AFGHANISTAN

Information available as of 2 March 1983 was used in the preparation of this Estimate.

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# THIS ESTIMATE IS ISSUED BY THE DIRECTOR OF CENTRAL INTELLIGENCE.

# THE NATIONAL FOREIGN INTELLIGENCE BOARD CONCURS.

The following intelligence organizations participated in the preparation of the Estimate:

The Central Intelligence Agency, the Defense Intelligence Agency, the National Security Agency, and the intelligence organization of the Department of State.

Also Participating:

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, Department of the Air Force

The Director of Intelligence, Headquarters, Marine Corps

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## **KEY JUDGMENTS**

In the year that has elapsed since the publication of SNIE 11/50/37-82, the use of chemical and toxin agents has continued and we have found nothing in the evidence acquired since the beginning of 1982 that would contradict our earlier findings on any of the countries with which we are concerned. The evidence has continued to come from many different sources and has amplified our understanding of events of previous years as well as events occurring during 1982.

In *Afghanistan*, the Soviets have continued to use chemical agents selectively, through at least January 1983. Analyses of physical samples have, for the first time, provided evidence of mycotoxins. Chemical agents other than toxins have also been used, but we have not yet been able to identify them through sample analysis.

In *Laos*, Vietnamese and Lao troops, under Soviet supervision, have continued to use lethal and incapacitating chemicals and toxins against the H'Mong resistance, through at least December 1982.

In *Kampuchea*, the Vietnamese forces have continued to use lethal and incapacitating chemicals and toxins against the DK and KPNLF resistance forces, through at least February 1983.

In *Thailand*, in 1982, Thai villages near the Kampuchean border for the first time became targets of Vietnamese chemical attacks. Samples from these attacks have been analyzed and trichothecene mycotoxins have been identified.

Physical samples from both Laos and Kampuchea provide further confirmation that trichothecene mycotoxins are among the agents used. Our earlier conclusions on this have been reinforced by much better medical data and additional chemical analyses

Toxins have been found in urine, blood, and tissues of victims of "yellow rain" attacks and in samples of material collected from attack sites.

Soviet implication in the provision and use of these weapons continues to be supported by reporting from defectors, resistance groups, and refugees.

In 1982, independent investigations conducted by other governments

as well as by private groups, yielded evidence and analysis broadly supportive of US conclusions.

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# DISCUSSION

### US Evidence of Chemical Warfare

In Laos

1. Throughout 1982 the Vietnamese and Lao continued their policy of using lethal agents and toxins against villagers and resistance forces in Laos. While the pattern of attacks remained consistent with that of previous years, the number of fatalities reported per attack decreased. The decrease suggests that less lethal chemical agents or lower concentrations of the same agents have been used. The decrease could, however, also be attributed to other factors:

- The H'Mong population had already been decimated by the high fatalities and refugee exodus caused by earlier attacks dating back at least to 1976.
- Surviving H'Mong people remaining in Laos were more wary and quick to take cover at the first indication of an attack.
- The H'Mong survivors were not taking time to count victims. This is supported by the very few reports that cite precise numbers for casualties in specific chemical attacks

2. Descriptions of the attacks have not changed significantly. The H'Mong typically describe aircraft or helicopters as spraying a yellow rainlike material on villages and crops, causing in the human targets the familiar hemorrhaging symptoms characteristic of tricothecene toxin poisoning, as set forth in detail in the SNIE. In a number of cases, however, only abdominal pain and prolonged illness, and no bleeding, were reported. The divergence of symptoms, also observed in earlier years, suggests that other agents or combinations of agents are also being used. One likely explanation is that different solvents or carriers, exposure levels, and routes of absorption for the same agents alter their efficacy in individual attacks. The situation is further complicated by the fact that different groups-men, women, children, and animals-often exhibit different symptoms.

3. The trichothecene toxins that have been identified by the United States are only one of the components of "yellow rain." There is much that we do not know about the total composition of the material sprayed or dropped from aircraft, or about other chemicals that may be in use. For example, the H'Mong consider the red smoke they have observed in rocket/artillery munitions as more toxic than the "yellow rain." They have also reported the use of a green gas and described a white sticky substance that dried to a powder and produced smallpox-like rash and necrosis of the skin. These reports indicate that several different types of agents have been used both to inflict casualties on the resistance forces directly, and to drive the H'Mong from their villages by contaminating the environment

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supports our earlier judgment that the Soviets are directly involved in chemical warfare support in Laos. This involvement includes training, storage and inspection, and supervision of use of chemical agents. *Conclusive* proof of Soviet supply of the chemical agents is still lacking. Indeed, given the limited collection possibilities and opportunities available to us, such proof is unlikely to be acquired.

#### In Kampuchea

5. In 1982 the Vietnamese demonstrated their indifference to the international concern over the use of chemical warfare by conducting a number of attacks near the Thai border (at least six occurred on Thai territory) and by continuing the attacks even while the UN investigating team was in Thailand. Proximity and visibility of the attacks made collection of fresh samples for analysis much easier than was the case in Laos and Afghanistan. That proximity also allowed other governments and international organizations to examine recent victims and collect evidence.

6. In 1982, Kampuchea provided a wider range of sources and kinds of information than in previous years. The earlier chemical attacks were conducted primarily against the Democratic Kampuchea (DK) troops, who served as the main source of information. At present, information is also obtained from the Khmer People's National Liberation Front (KPNLF), 25X1

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Thai and other government representatives, Vietnamese defectors, and international organizations.

7. The number of deaths reported per attack also decreased in Kampuchea. As in Laos, the decrease may be explained by Vietnamese use of less toxic chemicals or less effective methods of dissemination or by improved countermeasures taken by DK forces and other intended victims. As in previous years, both Vietnamese and resistance forces claimed deaths and casualties from poisoned food and water.

8. The combat situation in Kampuchea is much different from that in Laos. There is a greater frequency of direct engagement of field combat forces, frequently involving exchanges of artillery fire. Chemical shells are often fired on opposing forces or their sanctuaries. has verified at least one such chemical attack in late 1982.

the Vietnamese also spread chemicals along trails and the border. As in Laos, there are also confirmed reports of aircraft spraying "yellow rain."

9. Our first positive identification of trichothecene mycotoxins came in 1981 from a sample collected in Kampuchea. Since that time, samples of vegetation, residue, soil, and water, as well as human blood, urine, and autopsy tissue, have been collected and analyzed. These analyses have been positive, showing that the Vietnamese have continued to use toxins. Background control samples have continued to be negative. Other chemical agents or combinations are also being used, but we have not yet been able to identify them through sample analysis.

#### In Afghanistan

10. The Soviets have continued selective use of chemical agents throughout the past year against resistance forces and against villages that did not cooperate with the Afghan authorities. Reports during 1982 have amplified and added credibility to our earlier findings. In Afghanistan there is no question that the Soviets themselves are using chemical agents and possibly toxins. In addition, we continue to receive reports that the Soviets have provided chemical agents to the Afghan forces for use against the Mujahedin.

11. For the first time we have evidence of the presence of trichothecene mycotoxins in Afghanistan, through the discovery of toxin contamination of a piece of Soviet protective equipment. Laboratory

analysis of a Soviet protective mask has revealed the presence of T-2 toxin (sample 7, annex D, table D-3), in a quantity of approximately 1 microgram on the area examined (one-fourth of the mask). This finding was confirmed independently by three different laboratories.

12. Also for the first time, the United States acquired new (unused) Soviet gas masks, canisters, and complete protective suits captured from a Soviet convoy by Mujahedin forces in August 1982. No information on the location of the attack or intended destination of the convoy is available. It is reasonable to hypothesize that the Soviets would not provide such protective gear to their forces in Afghanistan unless they anticipated a need for it that is, for use in connection with employment of CW agents and weapons. Comprehensive protective gear of this sort would not be required as protection against the kinds of nonlethal riot control chemicals that the Mujahedin have been accused of using.

13. Reporting from Afghanistan had long included descriptions of events similar to the "yellow rain" attacks reported from Southeast Asia. However, because of the remoteness of attack sites and difficulties in sample collection, we have been unable to obtain physical evidence of the presence of mycotoxins in Afghanistan until the recent confirmation of the presence of T-2 on the Soviet gas mask. This now greatly strengthens our previous assessment that "toxins probably have been used since 1980."

14. The biggest mystery remains the identification of the other agents being used. Some familiar CW agents can be inferred from descriptions of signs and symptoms. For example, the medical effects resulting from some chemical attacks are consistent with the use of the nerve agent tabun. (Reportedly, tabun is one of the agents present in the CW stocks maintained by Soviet forces in Afghanistan.) Other reports indicate use of an incapacitating agent that causes unconsciousness for several hours.

15. As early as 1980 we began receiving reports of Soviet forces dropping or pumping one or more chemical agents into tunnels, caves, and underground waterways where resistance forces and their families take shelter. Reports of those incidents contain descriptions of symptoms that have puzzled the experts. Of particular concern are reports of rapid blackening and decomposition of tissue, a description that fits none of the CW agents known to us. The frequency

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and consistency of these accounts from many different tribal groups have led us to conclude that they must be taken seriously and that we may be dealing with a new class of chemical or toxin agent or with combinations not previously known to the West.

interviewed eyewitnesses who reported that gasoline and probably diesel fuel were poured into tunnels and ignited with incendiary powder and shells. The number of deaths and condition of the bodies were consistent with fire and asphyxiation.

16. There has been no change in the manner of dissemination of the chemical substances. The predominant delivery system still appears to be helicopters firing CW rockets, dropping chemical-loaded bombs or canisters, or spraying chemicals directly.

#### Findings From Other Countries

17. There is a growing body of international evidence that supports the US findings of chemical weapons use. Non-US private experts and governments have collected and independently analyzed samples and have obtained testimony from witnesses of attacks and from medical personnel. A few examples follow.

18. Non-American physicians with good credentials in tropical medicine have testified that they have treated chemical warfare victims. For example, a French physician has provided testimony on his treatment of victims at a Kampuchean hospital. Similar testimony came from a Swedish International Red Cross worker in Kampuchea. A New Zealand doctor and his British associate at the World Vision Hospital at Ban Vinai refugee camp are convinced that H'Mong villagers are victims of repeated chemical warfare attacks in Laos. An increasing number of these physicians have made strong public statements and, to date, not one doctor who has examined victims claiming CW injury has publicly or privately disputed his claims after examination.

19. Two French physicians who worked in Afghanistan described the unusual wounds caused by what they believe were poisoned bullets. French scientists have found trichothecene toxins in samples from Southeast Asia. Thai scientists have reported finding mycotoxins in their samples.

20 officers acquired portions of gas masks from attack sites in Afghanistan.

The tests conducted on them are as yet incomplete, but early indications and some signs and symptoms of persons handling the contaminated masks suggest that chemical agents were used in the attacks.

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21. Several carefully done epidemiological studies have been prepared by Canadian governmental and academic institutions. Their findings are consistent with ours on all but technically minor points.

22. The December 1982 report of the UN Experts Group provided as much support as the United States could reasonably expect from such a multilateral entity. The document supported individual US claims in more than a dozen specific technical areas, faulted the Soviet "scientific explanation" in strong language, and declared other hypotheses (other than use of CW) to be remote and inconsistent with the human testimony and the laboratory data at hand. Its failure to support the US charges fully was attributed by most of the world press to the political—not scientific—inhibitions of the Experts Group.

#### Implications for Intelligence

23. The fact that chemical and toxin agents continue to be used in Laos, Kampuchea, and Afghanistan despite a highly publicized UN investigation, diplomatic pressure on the Soviet, Vietnamese, and Lao Governments, and growing international acceptance of the evidence suggests that the perpetrating governments do not believe that their activities are as yet sufficiently damaging politically to warrant their termination. This is not to say that Moscow, Hanoi, and Vientiane have ignored the charges being levied against them. But rather than stopping the illegal use of chemical and toxin agents, they have launched a major propaganda counteroffensive.

24. In May 1982 the Soviets submitted a "scientific" study to the UN blaming the toxin poisoning in Laos and Kampuchea on US use of herbicides during the Vietnam war. The Soviet study claims that widespread use of herbicides allowed toxin-producing fungi to flourish in Vietnam. Winds then allegedly blew the spores into Laos and Kampuchea, contaminating the environment. It is surprising that the Soviet Academy of Sciences would lend its name to the production of such a scientifically indefensible paper. Nevertheless, the overall Soviet counterpropaganda effort has not been without effect in diverting public attention away from the Soviet actions and focusing them on the

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proposed US chemical warfare modernization program and on past US use of herbicides in Vietnam. An international scientific conference was held in Ho Chi Minh City (Saigon) in January 1983 to call attention to the long-term effects of herbicide use on nature and man.

25. The comprehensive assessment of the CW evidence that the United States has published and briefed worldwide in classified and unclassified form has helped to persuade many governments that lethal agents, including toxins, are being used and that the Soviet Union is implicated. There is a reluctance on the part of most governments, however, to levy such charges publicly. Governments are loath to take a public position on the issue because to acknowledge that the USSR has violated its international commitments is to call into question the trustworthiness of the USSR as a party to arms limitation agreements. Even the most conclusive and incontrovertible intelligence evidence is unlikely to galvanize other governments into forceful public positions on an issue that has such politically unpleasant implications.

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