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## **MOSCOW'S POISON WAR: MOUNTING EVIDENCE OF BATTLEFIELD ATROCITIES**

### **INTRODUCTION**

From the battlefields of Laos, Kampuchea and Afghanistan, grisly evidence mounts of the systematic use of universally condemned methods of warfare. There the Soviet Union and its proxies are waging a clandestine war of chemical terror against the political and ethnic groups that have refused to be subdued by conventional arms. In exasperation, Soviet-backed forces have turned to a poisoned earth policy designed to drive indigenous nationalists and anti-communist guerrillas in Laos, Kampuchea and Afghanistan from their homeland sanctuaries. The result: thousands of men, women and children have been indiscriminately slaughtered in what could become, if unchecked, a brutal poison holocaust.

At first, there were only scattered stories of chemical atrocities and they were disbelieved and generally ignored. But the reports persisted and damning proof mounted. In recent months, the evidence has become irrefutable and stands as an indictment of the Soviet Union for crimes against humanity.

### **MYSTERIOUS DEATH CLOUDS**

In 1976, terror-stricken refugees began streaming out of Laos carrying news of a gruesome new addition to the arsenal of the Soviet bloc. They told of a poisonous yellow cloud that they called "Yellow Rain" because small particles in the cloud made sounds like raindrops as they settled on the roofs of their huts and on the surrounding fields. The mysterious yellow poison, delivered by aerial bombing and artillery attacks, inflicted bizarre and grievous injuries on the victims, often resulting in quick, painful death. Direct exposure to the clouds caused breathing difficulties, extreme irritation of the eyes, skin, nose, throat and lungs. Small, hard blisters formed over

exposed body surfaces. This was accompanied by coughing of blood-tinged material, choking, dizziness, multiple hemorrhaging of mucous membranes, vomiting massive quantities of blood, the seeping of blood from eyes, ears and nose, convulsions, and death. All this happened within hours, sometimes minutes. Shortly after death, the skin turned black.

Villagers less exposed to the poisonous cloud reportedly took longer to develop the symptoms and had some chance of surviving. Many of these, however, died after a prolonged and agonizing struggle with grotesque maladies: terrible skin blistering, chest pains, inflammation of the eyes, nose, throat and breathing passages, nausea, vertigo, bloody diarrhea, massive hemorrhaging throughout the body but especially the lungs, the spewing of blood from all body orifices, neurological spasms and shock. So many different vital organs and bodily functions were damaged that it was difficult to determine the precise cause of the victim's death. So ghastly was the spectacle that one expert described the victims as "walking hemorrhages" who literally drowned in their own blood.

The poison clouds also killed livestock and damaged crops and vegetation. Plants contaminated by the powdery residue developed numerous scorched blotches about one millimeter in diameter scattered over the surfaces of the exposed leaves. These distinctive marks did not resemble the after-effects of any known chemical weapon, herbicide or plant pathogen.

Initial reports of "Yellow Rain" were confined to the Hmong tribal areas in central Laos. Later, tales of similar chemical attacks began trickling in from Cambodian refugees in Thailand and Afghan refugees in Pakistan. The descriptions they gave were remarkably similar -- particularly so because these refugees had very limited medical knowledge and were separated from each other by vast geographical and cultural differences. Each of these technologically unsophisticated peoples described the results of the poison in terms of their own experience and cultural backgrounds. The Kampucheans, for instance, reported that the victims in their death throes "were jerking like fish when you take them out of the water"; the Afghans recounted scenes of compatriots "jerking like dogs with broken backs." The similarity of these persistent reports of unusual medical symptoms, coming from rural peoples with minimal contact with the outside world as well as each other, made it impossible to discount such statements as inventions of opponents of the local regime. Not only did the flood of refugees fleeing the affected areas provide similar accounts of appalling deaths, but the doctors treating survivors in field hospitals and relief camps thousands of miles apart recognized similar after-effects: hoarse voices, vision impairment, weakness, lung disorders and skin lesions.

## THE SEARCH FOR THE SMOKING GUN

In fall 1979, the Pentagon dispatched an army medical team to Thailand to verify rumors of chemical warfare in neighboring Laos and Kampuchea. After extensive interviews with refugees who had witnessed attacks, Dr. Charles Lewis, the head of the medical team and chief of dermatology at the Brooke Army Medical Center in San Antonio, Texas, identified three basic sets of symptoms produced by "Yellow Rain": 1) skin burns and burns to the eyes, nose and throat; 2) spasms and convulsions; and 3) massive hemorrhaging. Lewis concluded that at least two or possibly three different chemical agents were involved: a vesicant or blistering agent that caused the burns, a nerve agent that caused the convulsions and an unknown agent that produced the hemorrhaging.

The medical team was given a sample of the yellow substance left behind in one attack but experts were unable to detect any known chemical agent. They did discover, however, a chemical "surfactant" called lauryl sulfonate, commonly used in liquid soaps and detergents to facilitate penetration of surfaces to be cleaned. While army doctors were unable to identify the specific agent or agents being used, they returned to the U.S. totally convinced that chemical attacks were in fact taking place. There could be no other explanation for the numerous accounts of "Yellow Rain" or the presence of lauryl sulfonate at the site of one attack.

These findings, however, evidently were not welcome by the Carter Administration. It soft-pedaled the issue of chemical warfare in Southeast Asia apparently because it did not want to irritate the Soviets, with whom the U.S. was negotiating an arms control agreement. The State Department adopted what, in retrospect, was an overly-cautious, non-committal stance. It did not want to raise the issue without absolute proof and this was inordinately difficult to obtain. While the intelligence community was extremely interested in the reports, it wished to verify them covertly to avoid alerting the Soviets that their actions had been detected. The issue may well have faded were it not for the determined efforts of a number of individuals horrified by the use of battlefield poisons: Representative Jim Leach (R-Iowa), who focused congressional attention on the issue; journalist Sterling Seagrave, author of Yellow Rain, the most complete published account of Soviet and Soviet-sponsored chemical warfare operations; and Jane Hamilton-Merritt, an expert on the Hmong hill tribes and author of "Gas Warfare in Laos" (Reader's Digest, October 1980) and "Tragic Legacy from Laos" (Reader's Digest, August 1981). Among the organizations which have brought the matter to public attention are the Committee for a Free Afghanistan, Freedom House and the International Rescue Committee.

Since taking office, the Reagan Administration has proved less concerned than its predecessor about "upsetting" the Soviets. The new team in the White House pushed hard to obtain irrefutable evidence of illegal chemical warfare activities. Solid evidence

was elusive because the attacks were in remote locations deep within communist-controlled territory and the attackers seemed to be taking special precautions by using Napalm to destroy residue of the chemical attacks. Survivors understandably had not thought of gathering physical evidence of the attack while their comrades writhed nearby in their terrible terminal agony. Nor could survivors be expected to risk contamination to acquire evidence. Some who did attempt to collect proof and transport it out of the war zone died from exposure to the evidence that they were carrying. Others lacked the strength for the long trek to a friendly border after exposure to the toxic agents. Moreover, by the time that word of an attack had filtered into a friendly country, the evidence at the site of the attack typically would have been dissipated by the heavy rains in Southeast Asia, the storms and snows in Afghanistan and other natural processes. Producing a corpse was nearly impossible because of the problems with transporting it through enemy lines and the speed of body decomposition in Southeast Asian jungles. In Afghanistan, moreover, any attempt to use the corpse as evidence would conflict with the Moslem custom of burying the deceased on the day of death.

#### THE SMOKING GUN: TRICOTHECENE MYCOTOXINS

Despite the difficulty of securing physical evidence of chemical attacks and the arduous, time-consuming task of identifying the mysterious chemical agent, Washington finally has solved the five-year-old riddle of "Yellow Rain." Secretary of State Alexander Haig announced on September 13, 1981, that the United States has identified the critical lethal agent as a compound composed of three tricothecene mycotoxins<sup>1</sup> -- poisonous substances produced by the fusarium fungus. These mycotoxins were found at the site of a "Yellow Rain" attack in levels up to twenty times greater than they occur in nature. These mycotoxins are a perfect fit for "Yellow Rain"; they produce all the symptoms of poisoning reported and do not produce any symptoms not reported."

The first State Department announcements were based on one sample of lethal powder taken from a leaf at the site of an alleged chemical attack. Findings based on such evidence were open to criticism because they lacked the important negative controls of the testing process that could have provided information about the tricothecene levels of uncontaminated vegetation outside the immediate area of the attack. However, legitimate doubts about the validity of the findings subsequently were erased in early November when three new samples were tested. One of the new samples was water taken from the same Kampuchean

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<sup>1</sup> The substances were identified as Nivalenol, Deoxynivalenol, and T-2 toxin. All three produced similar symptoms but differ in the degree of severity; while Nivalenol was a stronger hemorrhagic, Deoxynivalenol induced harsher vomiting and T-2 had greater skin irritative effects.

village which provided the first evidence. The two other new samples came from separate chemical attack sites in Laos. Two of the three had even higher tricothecene levels than the first. Specimens of uncontaminated background soil and vegetation from the areas confirmed that the identified mycotoxins do not occur naturally in the affected areas.

At a Senate Foreign Relations Committee hearing on November 10, Richard Burt, Director of the State Department's Bureau of Politico-Military Affairs, testified that "Yellow Rain's" mysterious lethal agent had been conclusively identified: "We now have a smoking gun. We now have four separate pieces of physical evidence. We may soon have more as, I regret to say, chemical attacks have been reported in Laos and Kampuchea within the last month....Anyone who conducts his own inquiry will come to the same conclusions we have."

#### THE SOVIET CONNECTION

There is more than a smoking gun. There is strong evidence that it is Soviet-made and Soviet-supplied. Equally damning is the evidence that Soviet advisors in Southeast Asia may be involved in the use of the terror-weapon and that Soviet troops in Afghanistan undoubtedly are. "Yellow Rain" and other chemical weapons are being delivered by Soviet-made aircraft, rockets and artillery. Members of the U.S.S.R. Chemical Corps are present in large numbers in Afghanistan and have been reported in Laos, where they may be gauging the battlefield effectiveness of chemical delivery techniques and toxic munitions.<sup>2</sup>

Although Moscow seems for the most part to leave the actual chemical attacks to its Vietnamese, Kampuchean and Pathet Lao allies, there are reports that the Soviets also have taken part directly in the attacks. Hmong tribesmen have seen "roundeye" pilots in the slow, low-flying AN2 aircraft -- Soviet biplanes used as crop-dusters in the U.S.S.R. -- that drop the "Yellow Rain" over Laos. A Vietnamese defector says that he observed two Soviet advisors fire a round of chemical munitions at Khmer Rouge guerrillas inside Kampuchea.<sup>3</sup>

Soviet technical support personnel participate actively in the operations of the chemical warfare logistical infrastructure in Laos, Vietnam and to some extent Kampuchea. Independent intelligence sources confirm that a seven-member team of Soviet chemical warfare specialists visited the Laotian cities of Pekse and Seno to inspect chemical weapons after chemical attacks in

<sup>2</sup> For example, see the State Department's compendium, "Reports of the Use of Chemical Weapons in Afghanistan, Laos and Kampuchea," Summer 1980, p. 43.

<sup>3</sup> Reported in Bangkok Post article reprinted in FBIS, Daily Report, Asia and the Pacific, September 25, 1981, p. J1.

1978.<sup>4</sup> Thai military intelligence and American radio monitors have recorded and translated radio conversations of Russian officers giving instructions for shipment of chemical warheads from a chemical munitions depot in Laos up a highway toward Phu Bia Mountain, the Hmong stronghold that has been the target of repeated chemical attacks for over five years. Another radio intercept recorded an exchange about a high-ranking Soviet general touring several chemical munitions depots.<sup>5</sup>

While the Vietnamese have had some chemical warfare units for some two decades and are capable of conducting chemical operations, it is extremely doubtful -- if not impossible -- that they could produce the large quantities of mycotoxins that are being dumped on villages and fields in Southeast Asia. Not only does Indochina lack large-scale biological fermentation facilities, but the four chemical warfare depots already identified in the area are known (through radio intercepts) to be receiving chemical munitions from the Soviet Union.<sup>6</sup>

Among the world's communist states, only the Soviet Union possesses the industrial facilities and chemical warfare research, testing and production capabilities needed to produce large amounts of mycotoxin in a form that could be used effectively as a weapon.

The combination of tricothecene mycotoxins identified in the "Yellow Rain" samples does not occur naturally in plants native to the jungles of Southeast Asia. The fusarium fungus producing these mycotoxins thrives on grain and bread exposed to cold, wet climates and exists throughout much of the U.S.S.R., where historically it has posed a serious threat to the Russian food supply. Large-scale epidemics of what the Russians have called "staggering sickness" (above all, a bleeding disease) repeatedly have broken out in the Ukraine, Soviet Central Asia, the Urals and Siberia due to the contamination of the Russian grain stores by potent mycotoxins. In 1944, up to thirty percent of the population of the Orenburg district in Siberia were stricken by the poison and an estimated ten percent of the population -- almost thirty thousand people -- reportedly died.

Soviet scientists began studying the disease intensively in the 1930s and mycotoxins have figured prominently in Soviet scientific literature over the past fifty years. Sterling Seagrave points out that of the fifty articles on tricothecenes in Soviet open source literature, twenty-two deal with defining the optimum conditions for biosynthesis of the compounds,<sup>7</sup> a sign that the Soviets have more than a passing interest in obtaining large quantities of the poisons. Research projects on mycotoxins are

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<sup>4</sup> William Safire, "Yellow Rain," New York Times, December 13, 1979.

<sup>5</sup> Sterling Seagrave, Yellow Rain (New York: Evans, 1981), p. 35.

<sup>6</sup> Ibid.

<sup>7</sup> Ibid., p. 192.

carried out at heavily guarded Warsaw Pact institutes which previously worked on chemical and biological warfare research.<sup>8</sup> With the world's most advanced research program in the field of tricothecene toxicology, the Soviets definitely possess the knowledge, personnel and facilities needed to produce the poisonous ingredients of "Yellow Rain."

It now appears, moreover, that the mysterious gas that took hundreds of lives during the final stages of the 1963-1967 Yemen Civil War may have been an early version of "Yellow Rain." Not only was the poison gas in Yemen never identified, but victims of the gas attacks suffered the same hellish symptoms as did the victims of "Yellow Rain" a decade later.

As if to admit tacitly that it has something to hide in the matter, Moscow repeatedly has tried to block formation of an impartial U.N. commission to investigate the situation in Laos, Kampuchea and Afghanistan and has not cooperated with it once formed.<sup>9</sup> Moscow and its allies have denied the U.N. access to the sites of chemical attacks. Despite Soviet obstructions, a U.N. panel of experts was dispatched to Thailand in November to verify reports of Communist chemical warfare activities in neighboring Laos and Kampuchea. Because the panel was not granted sufficient time or resources to fulfill this mandate, it was unable to reach a final conclusion as to whether or not chemical weapons had been used. However, it did note that the symptoms reported in some cases "could suggest a possible use of some sort of chemical warfare agents." In view of these tentative findings, the U.N. General Assembly overrode Soviet bloc objections and on December 9, 1981, voted 86 to 20 (with 34 abstentions) to extend the investigations for another year. Since Pakistan recently granted the U.N. panel permission to visit Afghan refugee camps inside its borders, the U.N. panel of experts is now expected to address the matter of chemical operations within Afghanistan.

The investigation of reported chemical warfare incidents is a critical test of United Nations credibility. A November 27, 1981, Washington Post editorial declared:

The United Nations group has so far not accomplished much of anything...the group must be given adequate time and financial resources to accomplish a difficult task...The charges being investigated, after all, go beyond whether this or that chemical has been used. They engage nothing less than what the United Nations is all about -- the international rule of law. The

<sup>8</sup> State Department Fact Sheet, September 1981, p. 2.

<sup>9</sup> During the Korean War, the U.S. called for the U.N. Security Council to investigate Soviet charges that the U.S. was using bacteriological weapons. The investigations were blocked, however, when the Soviets vetoed the measure in the Security Council.

integrity of the international system demands that they be conclusively proved or refuted.

#### CHEMICAL ATTACKS IN LAOS

Reports of chemical attacks began filtering out of Laos in 1976, although the first attacks began as much as two years earlier. The State Department has documented well over one hundred separate assaults, most against the Hmong (also known as Meo) hill tribes of central Laos. As traditional foes of the lowland Pathet Lao, the Hmong sided with the French against the Viet Minh in the early 1950s and sustained an estimated 30,000 casualties aiding the U.S. fifteen years later. For this reason, they are hated by the Vietnamese and Pathet Lao who have used chemicals to attack defenseless villages inhabited by old people, women, children and other non-combatants. At least half of the Hmong surviving the gas attacks died on the trek to Thailand of exhaustion, malnutrition or Pathet Lao ambushes. The few who manage to get across the Mekong River to Thailand have been described as "walking skeletons carrying skeletons out of the jungle."

In addition to the "Yellow Rain," the Vietnamese and the Pathet Lao have employed a lethal red colored gas and less potent blue-green and white poisonous gas clouds. These are delivered by helicopters, fixed-wing aircraft, artillery and rockets. The attackers, it seems, are testing various combinations of chemical agents and means of delivery. Pathet Lao soldiers, meanwhile, appear to be experimenting with antidotes to the poisons. There have been reports of soldiers wearing cloth masks entering the villages shortly after gas attacks to inject the inhabitants with medicine and then take them to hospitals for observation.<sup>10</sup>

These attacks are destroying the Hmong as a people. While Hmong in Laos numbered about 500,000 in 1960, there are now fewer than 100,000 remaining; 100,000 are in Thai refugee camps or relocated to the West, including about 40,000 in the United States. At least 15,000 to 20,000 Hmong are estimated to have died in the communist chemical onslaught.<sup>11</sup> Many of those who successfully have fled to freedom were exposed to poison gas and continue to suffer constant headaches, painful muscles and joints, pulmonary disorders, and eye and ear problems. At least thirty-five Hmong adults in the U.S. have died suddenly in their sleep for no apparent reason.<sup>12</sup>

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<sup>10</sup> See, for example, State Department Compendium, p. 68.

<sup>11</sup> Seagrave, *op. cit.*, p. 253.

<sup>12</sup> Jane Hamilton-Merritt, "Tragic Legacy from Laos," Reader's Digest, August 1981, pp. 96-97.



## CHEMICAL ATTACKS IN KAMPUCHEA

The State Department has documented at least twenty-eight separate chemical attacks in Kampuchea. The evidence comes from interviews with Kampuchean refugees, Vietnamese defectors and Kampuchean nationalist resistance fighters. As in Laos, the munitions used and means of delivery varied widely. Chemical attacks began much later than in Laos and increased markedly in late 1979. "Yellow Rain" weapons have not been used as frequently as in Laos -- possibly because the contested terrain was too close to the Thai border and also was much more vulnerable to conventional military attack than the mountain sanctuaries of the Hmong in northern Laos.

In a typical chemical operation in May 1981, a Vietnamese mortar attack only miles from the Thai border left scores dead and drove sixty-five Kampucheans across the border to Thai refugee hospitals where they received treatment. Thai army tests found traces of cyanide in water samples and plant life recovered from the area, while the Bangkok-based International Committee of the Red Cross confirmed that numerous people were being treated for chemical poisoning, some of whom died.<sup>13</sup> The Vietnamese also have launched chemical attacks on the Thai side of the border. In March 1980, a Vietnamese aircraft violated Thai airspace to drop toxic gas after it was fired on by Thai forces.<sup>14</sup> On January 29, 1982, the State Department announced that the analysis of nine blood samples taken from survivors of a chemical attack in the fall of 1981 provided additional evidence of chemical operations inside Kampuchea.

## CHEMICAL ATTACKS IN AFGHANISTAN

State Department files contain evidence of well over fifty instances of chemical attacks in Afghanistan. U.S. officials receive a constant flow of eyewitness reports from Afghan freedom fighters, journalists and doctors who have treated survivors of chemical attacks. Although no physical evidence has yet been retrieved from the remote Afghan hinterland, technical methods and human intelligence accounts, corroborated by the testimony of Afghan army defectors, leave no doubt that chemical weapons are being employed in Afghanistan. All that is missing -- as it was for a while in Southeast Asia -- is the "smoking gun."

The first accounts of communist chemical operations in Afghanistan date from late summer 1979, four months before the Soviets overtly invaded. At that time, freedom fighters attempting to interdict the strategic Salang highway were bombed with what an Afghan army officer (who later defected to the nationalist

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<sup>13</sup> "Chemical Warfare in Southeast Asia," Wall Street Journal, September 21, 1981, p. 34.

<sup>14</sup> State Department Compendium, p. 118.

side) termed "nerve gas."<sup>15</sup> Since the Soviet invasion, chemical attacks have been reported persistently in northeastern Afghanistan, particularly in the isolated northern province of Badakhshan. At least three broad types of gases have been identified -- a bright yellow or green riot control agent that causes painful skin blisters; an incapacitant dubbed Blue-X that renders its victims unconscious for up to eight hours; and a lethal agent that comes in several different colors and is believed similar to "Yellow Rain."

An eyewitness, who had survived a "dirty colored cloud, yellowish brown," recalls in anguish that "our fighters were throwing up blood as if they have been drinking blood and could not hold any more. There was also blood in their eyes, like tears, and from the nose. At first I thought it was from the concussion of the bomb, but the bomb did not make a big explosion. And our fighters did not have any marks on them. The rest of us ran from the cloud." In another incident, the same Afghan reports: "Our fighters died quickly. They were vomiting blood and fouling their clothes and began to act like crazy people falling down and jerking about."<sup>16</sup>

The yellowish brown clouds seem to be the favored weapon for attacking freedom fighters holed up inside caves and underground tunnels. Seagrave writes that such clouds have "brought the freedom fighters writhing from their caves to dance and squirm, and spew blood, and die in spasms on the bare rock reaches, like earthworms wriggling in a lethal spray of insecticide."<sup>17</sup> Dutch journalist Bernd de Bruin filmed such an attack, took still photographs of a dead freedom fighter whose skin had turned black and described the experience in the magazine Nieuwsnet in August 1980. An Afghan doctor now living in the United States, Dr. Bashir Zikria, has filmed survivors of a chemical attack, including one dying a lingering death from acute gas poisoning.

The Soviets are thought to be dumping a liquid poison into wells in southern and western Afghanistan and to be spreading an oily, persistent nerve agent on the ground in northeastern Afghanistan. This dreadful substance clings to the feet of passing freedom fighters and becomes lethal when warmed by a campfire or by body heat; it then kills in minutes. Ground observers have noted and satellite photographs have confirmed the deployment of Soviet decontamination units in forward combat areas, particularly in northeastern Afghanistan. Modern TMS-65 decontamination vehicles, capable of rapidly cleansing tanks and other equipment of chemical agents in the field, and AGV-3 detoxification chambers for decontaminating personnel, are used widely and maintained at high readiness. In view of the fact that the Afghan freedom

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<sup>15</sup> Ibid., p. 6.

<sup>16</sup> Both incidents quoted in Seagrave, op. cit., p. 139.

<sup>17</sup> Ibid., p. 138.

fighters pose no chemical threat to the Russians and since the Russians already have withdrawn non-essential military units from Afghanistan to hold down the size of their "limited" presence, the continued deployment of such decontamination units is a clear sign that Moscow is carrying out chemical operations.

#### SOVIET CHEMICAL WARFARE CAPABILITIES

The Soviet Union's offensive and defensive chemical warfare capabilities, systematically developed and refined over decades, are regarded as by far the world's best. Soviet military doctrine views chemical agents as an integral part of overall military strength and sees nuclear, chemical and biological weapons all as "means of mass destruction." Soviet doctrine teaches that chemical weapons are particularly well-suited for surprise attacks and for seizing military and industrial facilities without destroying them.

Among Moscow's forces are the 80,000 to 100,000 specialists of the Chemical Troops that are devoted to chemical warfare defense. (By comparison, the U.S. has 2,000 such troops.) In Soviet exercises, offensive chemical operations are carried out by conventional front line units, with division commanders responsible for the planning, release and execution of the attacks. Soviet military units have the training, equipment, doctrine and organization to conduct sustained chemical operations. Each division of ground forces maintains its own chemical defense battalion complete with decontamination facilities for personnel and equipment. Soviet armored vehicles are designed and equipped to function in contaminated zones and quickly can be decontaminated. Rigorous chemical operations training is routine in all terrain and weather conditions; chemical warfare defense techniques, in fact, are taught in elementary school.

Soviet stocks of chemical munitions exceed U.S. stocks by a ratio of at least 4-to-1 and perhaps by as much as 10-to-1. Some 5 to 30 percent of Soviet conventional munitions, say analysts, contain chemical payloads.<sup>18</sup> These include such first generation agents as mustard gas, second generation agents such as tabun, soman and VR-55 nerve gas and third generation agents such as the tricothecene mycotoxins.<sup>19</sup>

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<sup>18</sup> E. M. Kallis, "Chemical Warfare: Background and Issues," Congressional Research Service, June 1981. p. 6.

<sup>19</sup> For more information on Soviet chemical warfare capabilities see: John Erickson, "The Soviet Union's Growing Arsenal of Chemical Warfare," Strategic Review, Fall 1979; and Amoretta Hoerber and Joseph Douglas, "The Neglected Threat of Chemical Warfare," International Security, Summer 1979.

## TREATY VIOLATIONS

Chemical warfare has been prohibited on the battlefields of western nations for over fifty years. Under the terms of the 1925 Geneva Protocol, to which the Soviets are a party, asphyxiating, poisonous or other gases, bacteriological methods of warfare and all analogous liquids, materials and devices are banned from military use. The 1972 Biological Warfare Convention, also signed by Moscow, obliges states: "never in any circumstances to develop, produce, stockpile or otherwise acquire or retain 1) microbial or other biological agents, or toxins whatever their origin or method of production, of types and quantities that have no justification for prophylactic, protective or other peaceful purposes; 2) weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict."

As biologically produced chemical substances, mycotoxins fall within the prohibitions of both the 1925 Geneva Protocol, which forbids the use of chemical weapons in warfare and the 1972 Biological Weapons Convention which forbids production, stockpiling or transfer of toxin weapons. The Soviet Union stands in naked violation of these two treaties as well as of customary international law of armed conflict which prohibits the first use of such weapons.

By cynically violating these agreements, the Soviets have crossed the line respected by all civilized nations -- and even by the Nazis, who refrained from using their nerve gas stocks on battlefields during World War II. The poison atrocities in Asia, along with the 1979 Sverdlovsk incident<sup>20</sup> raise grave doubts about the credibility of the Kremlin's signature on international treaties.

## CONCLUSION

The Soviet Union, incapable of growing enough grain to feed its own population, is devoting enormous resources and attention to growing a grain fungus from which it extracts deadly mycotoxins for military use. Aside from what this says about the nature of the Soviet system, this chemical warfare effort is disturbing for what it indicates about Soviet intentions in any future conflict.

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<sup>20</sup> In April 1979, an explosion at a top secret Soviet defense laboratory released a cloud of anthrax spores in the vicinity of the city of Sverdlovsk, killing up to 1,000 Soviet citizens. Moscow initially dismissed reports of the accident as "impudent slander," then claimed the deaths were due to spoiled meat, an explanation that is contradicted by all of the available evidence. To this day, the Soviets have failed to explain the incident satisfactorily, thereby failing to meet their obligation under the 1972 Biological Warfare Convention, to "cooperate in solving any problems which may arise."

Although the lethal mycotoxins are now being field-tested exclusively on anti-Soviet guerrillas and villages in remote corners of the Third World, it is not so difficult to imagine them being unleashed on NATO or other western military forces in the event of a military showdown. Given the relatively poor preparedness of NATO armed forces for chemical warfare, this is a grim prospect.

The Soviet Union's calculated duplicity in producing toxin weapons, transferring them to client states and secretly deploying them is also disturbing because of what it says about Moscow's appraisal of the relative costs and benefits of breaking its obligations under international treaties. If the Soviets cheat on chemical warfare agreements in order to gain marginal advantages in Asia, may they not also cheat on the much more critical matter of strategic arms limitations?

Finally, the poisoning of thousands of civilian noncombatants is an indictment of the values, methods, and morality of the Soviet leadership itself. The Soviets have crossed a line that even Adolf Hitler, in the darkest days of World War II, refused to cross. The use of chemical weapons against remote Asian villages should be triggering international outrage on legal and humanitarian grounds. If these weapons continue to be used without thundering international protest they could attain a legitimacy that portends appalling consequences for all mankind.

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