

AN UPDATE ON THE OTHER GAS CRISIS: CHEMICAL WEAPONS

by

CHARLES H. BAY

"The imbalance [in chemical weapons] is continuing to grow and may soon reach the stage where it becomes threatening to (1) our ability to survive in Europe, (2) our ability to fight in Europe, and (3) our ability to control escalation."¹

The situation that prevailed in the fall of 1979 with respect to the United States and chemical weapons can be summarized as follows:²

- The United States is committed to effective and complete chemical weapons disarmament, not merely as another limitation on arms, but as a genuine, precedent-setting disarmament measure calling for the total destruction of an entire class of existing weapons.

- To this end, the United States participated in multilateral talks for years and undertook intensive bilateral negotiations with the Soviet Union in 1976.

- In the interest of facilitating progress in achieving chemical weapons disarmament and of relieving political pressures from the United Nations, the Committee on Disarmament, and other arms control lobbies, the United States has for over a decade unilaterally restrained an already deficient chemical weapons program—the source of a major component of the US deterrent to chemical warfare.

- The existing imbalance in chemical weapons is not an isolated tactical problem, but represents rather a serious and pervasive deterioration in the Western defense posture such that one-sided use of chemical weapons by the Soviet Union against NATO forces would have ominous strategic implications.

- The bilateral negotiations have—in almost three years—made little or no progress on major issues such as verification to which the United States attaches great importance. In fact, the Soviet position on verification remains essentially unchanged from what it was in the late 1960's.

- It seems clear that the US approach of unilateral restraint has failed: negotiating progress has not been achieved and the Soviets have demonstrated an apparent unwillingness to reciprocate US restraint with chemical weapons.

Since the foregoing assessment was prepared about a year ago, several matters have come to light which lend it a fresh, if more grim, validity. Of particular interest are the repeated and increasingly detailed accounts of the alleged use of chemical weapons in Southeast Asia and Afghanistan, as well as revelations of an outbreak of illness in the Soviet Union which may have been connected with a biological warfare agent.

USE OF CHEMICAL WEAPONS

In a hearing before a House of Representatives subcommittee in December 1979, Deputy Assistant Secretary of State Evelyn Colbert testified that US government investigations supported a conclusion "that

Report Documentation Page

Form Approved
OMB No. 0704-0188

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1. REPORT DATE 1980		2. REPORT TYPE		3. DATES COVERED 00-00-1980 to 00-00-1980	
4. TITLE AND SUBTITLE An Update on the Other Gas Crisis: Chemical Weapons				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army War College, ATTN: Parameters, 122 Forbes Avenue, Carlisle, PA, 17013-5238				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

some chemical agent or agents had been used against the people of Laos as part of the government's efforts to bring the H'Mong under its control." The testimony outlined how, "beginning in 1974, and with increasing frequency in 1976 and 1977, there were reports of the use of chemical agents delivered by air, causing illness or death among the H'Mong tribesmen."³

This information was apparently based largely upon the results of a visit to Thailand in September 1979 by a Department of Defense medical team. The team interviewed those refugees who either were exposed to a chemical agent attack or were eyewitnesses to one. The team documented 68 chemical attacks between June 1976 and May 1979 against H'Mong tribesmen. Based on these interviews, it is estimated that between 700 and 1000 people may have died as a result of the use of chemical agents and that many times this number were made ill. Indeed, it was reported that on numerous occasions entire villages were devastated by chemical agent attack, leaving no survivors. The team concluded that chemical agents had in fact been used against the H'Mong, and that the reported effects of the agents suggested that a nerve agent, a riot control agent, and an unidentified combination or compound had been used.⁴

In April 1980, Mr. Matthew Nimetz, Under Secretary of State for Security Assistance, Science, and Technology, told the same House subcommittee that "there have been additional reports of gas attacks in Laos" since the December testimony and that "the information at our disposal, both from the earlier period and the more recent reports, supports the conclusion that Vietnamese and Lao forces have used chemical agents against the H'Mong tribesmen for several years."⁵ Some refugees from Cambodia have reported that Vietnamese troops used toxic gas against Khmer Rouge guerrillas. Although sketchy and hard to pin down, earlier allegations that chemical weapons had been used focused on northeast Cambodia. In March 1980, Thai military sources reported that Vietnamese-led Cambodian troops were using chemical agents in efforts to clear Cambodia's western

border.⁶ An International Red Cross surgeon is reported to have confirmed these allegations based upon an autopsy of six Khmer soldiers.⁷

Secretary Nimetz also testified on the Soviet role in Laos and Cambodia:

I would note that the Soviet Union provides substantial military assistance and military advisors to Vietnamese and Laotian forces. Therefore, they would presumably be in a position at least to be aware that chemical agents had been used. Moreover, since we know of no lethal or incapacitating agents being produced in Southeast Asia, it is also possible that the Soviet Union is supplying any chemical agents, weapons, and training involved.⁸

In regard to Afghanistan, Mr. Nimetz testified that

The Soviets have deployed chemical defense battalions, standard in all Soviet divisions, with three of the operational divisions in Afghanistan. Soviet troops in the Kabul area have been seen carrying what appear to be gas masks in canvas cases. The Soviets may also have established decontamination stations in northeast Afghanistan. The presence of these chemical

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and defense battalions and stations . . . clearly does not confirm the actual use of toxic chemicals. However, such units would be essential for ground force operations on terrain contaminated with toxic agents. . . . There were unconfirmed reports that Soviet aircraft dropped chemical bombs on resistance strongholds in three eastern provinces even before the invasion. The earliest reports of air attacks were in August-September 1979, in which chemical agents were said to have been used . . . against nationalist forces. . . . Since the invasion, Afghan nationalist forces and refugees have reported the Soviet use of chemical bombs against their strongholds in Badakhshan and Konarha Provinces. . . .

Soviet MIG-type aircraft reportedly dropped bombs [and] the bombs reportedly exploded in mid-air, dispersing a 'vapor' that those affected by it said felt damp on the skin. Inhalation of the vapor is said to have caused difficulty in breathing, nasal excretions, vomiting, blindness, paralysis, and death. More recently, several Afghan refugees claim to have witnessed air attacks in which gas canisters were used against resistance forces and villages.⁹

Based upon reports from Afghan refugees in Pakistan and nationalist leaders, the US government has concluded that it is "highly likely" that Soviet invasion forces have used non-lethal chemical agents and that the chances are "about even" that lethal agents have also been used in trying to suppress the Afghan resistance.¹⁰

BIOLOGICAL WARFARE INCIDENT

The United States and the Soviet Union, among others, signed the Biological Weapons Convention in 1972. The agreement entered into force in 1975, requiring each party never in any circumstances "to develop, produce, stockpile, or otherwise acquire or retain (1) biological agents or toxins of types and in quantities that have no justification for prophylactic, protective, or other peaceful purposes"; or (2) weapons designed to use such agents or toxins in armed conflict.¹¹

Without provision for verification, the Biological Weapons Convention also required destruction of existing stocks within nine months of its entry into force. Although not required by the convention, no country other than the United States gave notice of such an act of destruction. All US stocks of biological agents and toxins, with the exception of laboratory quantities of such agents to support defensive research programs, were destroyed amid much public fanfare. Biological warfare facilities and laboratories were converted to major environmental and health facilities. In contrast, the Soviet Union simply announced that it "did not possess any biological agents or toxins."¹² Subsequent—although infrequent—news reports of biological weapons activity by the Soviets led some Western journalists to question periodically whether the Soviet Union had actually complied with the terms of the Biological Weapons Convention.¹³

In March 1979, a State Department spokesman announced that the United States had received "disturbing indications" that a large number of people in Sverdlovsk, a major Soviet city in the eastern Urals, might have been contaminated the previous April by a "lethal biological agent."¹⁴ Subsequent press reports indicated that there had been an explosion at a military facility apparently involved with biological weapons, and that an outbreak of pulmonary anthrax had occurred shortly thereafter. The first casualties of the disease were troops camped near the facility. Most casualties, however, occurred at a ceramics factory located downwind from the military site and in residential areas near it. The Soviets apparently sealed off a large area around the installation when the outbreak was discovered and distributed large quantities of antibiotics and anthrax vaccine. While it is impossible to determine reliably how many people died, a Russian journalist who immigrated to the United States last year told *Science* magazine that he had received underground communications from friends in Sverdlovsk to the effect that there had been about 1000 deaths.¹⁵

The Soviet reaction to these reports has been less than forthcoming. The Soviet Foreign Ministry first denounced them publicly as "impudent slander" and "ravings."¹⁶ Then, apparently in response to pressure generated by publication of additional details and continued questioning, the Soviets quietly informed the United States by note that an outbreak of anthrax had in fact occurred, but that it had been caused by the improper handling of meat products. Livestock infected with anthrax had been inadvertently slaughtered and marketed, spreading the disease to humans who consumed the tainted meat.¹⁷

The House of Representatives Intelligence Oversight Subcommittee apparently disagrees. In a press release of 29 June 1980 concerning the subcommittee's report, it was stated:

Information links the outbreak of inhalation (pulmonary) anthrax to an explosion at a military facility in Sverdlovsk long suspected of housing biological warfare activities. Subcommittee Chairman Les Aspin believes the Soviet Union has attempted to cover up the incident and has probably violated the Biological Weapons Convention: "The evidence is fairly good that the Soviets have cheated on the treaty. . . . The Soviets have told us the epidemic was gastric anthrax caused by contaminated meat . . . but tainted meat cannot account for the inhalation (pulmonary) anthrax we know was present in Sverdlovsk."¹⁸

WHERE WE MUST GO FROM HERE

Suspensions—like persistent chemical agents—linger. If the Soviet Union and its clients are using chemical weapons, and if the Soviets are engaged in biological weapons activities forbidden by the Biological Weapons Convention, the implications are many and profound. They are especially profound in terms of the continuing US-USSR chemical weapons disarmament negotiations and the US chemical warfare deterrent posture.

The chemical weapons negotiations are aimed at bringing about effective chemical disarmament: the destruction of existing chemical weapons and the elimination of production facilities. The Biological Weapons Convention, of course, was intended to accomplish the same result with biological weapons. There were, however, no provisions for verification in the Biological Weapons Convention for a variety of reasons. Politically, the United States was under intense international pressure in the late 1960's to do something about chemical and biological weapons because of Vietnam and the US use of riot control agents and herbicides there. Thus, in 1969 the United States unilaterally renounced the use of biological weapons under any and all circumstances. Having done so, the United States felt it was simply not in a position to hold out for effective verification, even had it wanted to, and that more political mileage could be gained by going along with an unverified agreement than by not doing so:

We did not give up biological weapons because of reliance on the Convention. [Rather,] having given up biological weapons, we wanted the Convention to impose restraints on others.¹⁹

The Sverdlovsk incident stands as evidence that the United States was unsuccessful in its quixotic efforts to impose biological warfare restraints on the Soviet Union. And it is now obvious that acceptance of on-site verification is more than ever an absolute necessity in any chemical weapons agreement. This need arises from the fact that chemical weapons and the facilities associated with them (as is the case with biological weapons and related facilities) cannot be adequately monitored by so-called national technical means. From off site, chemical weapons cannot be distinguished from conventional munitions, and production facilities cannot be reliably differentiated from commercial chemical plants.

The United States has consistently insisted that a realistic degree of verification

is necessary in a chemical weapons agreement. The Soviet Union has been just as consistent in its refusal to make such a commitment. It has advocated first and foremost verification by "national means" as supplemented by "on-site verification on a voluntary basis" should a suspected violation occur. (This latter is a variation of what is sometimes called a "challenge inspection.")²⁰ While the Soviet position may sound superficially plausible, it is necessary to get behind the rhetoric to understand why the Soviet position is, in effect, one of no verification at all. "National means" is quite different from "national technical means." It is a euphemism for self-inspection; that is, each party would be its own policeman. On-site verification on a voluntary basis means that if one party suspects another of violating the agreement, that party may ask to make an on-site visit to ascertain the facts. The suspected violator can then "volunteer" to permit such a visit or can reject it. Thus, the United States and other potential parties to a chemical weapons convention are being asked to trust the Soviets to destroy their stocks of chemical weapons and dispose of related production facilities as agreed, with the prospect that should a question concerning Soviet compliance arise, an on-site visit could be requested, although there would be no assurance that it would be permitted.

It does not take much reading between the lines to conclude that the Soviet position on chemical weapons is remarkably similar to what they previously agreed to in the Biological Weapons Convention, the major difference being that the Biological Weapons Convention does not have a provision for challenge inspections.

Now, however, we have a suspected violation of the Biological Weapons Convention by the Soviets. Under present circumstances, assuming the Biological Weapons Convention did have a challenge inspection provision, it seems evident that the United States would be in a strong position to ask for permission to visit Sverdlovsk to ascertain whether a violation actually did occur. What would or should the United States do if such a request were denied and

the Soviet Union simply continued to insist that it was purely a matter of contaminated meat? The options are not at all promising, and there do not seem to be any simple means to get to the complete truth. In any case, experience to date with the biological weapons incident clearly demonstrates why much more stringent provisions for verification and for dealing with questions of compliance must be absolute preconditions to an acceptable chemical weapons disarmament agreement.²¹ Indeed, since the future of US-Soviet arms control agreements has now been severely clouded by the Sverdlovsk incident, it is unlikely that an already skeptical US Senate would ratify a chemical weapons agreement containing anything less.

As pointed out earlier, there has been a negotiating stalemate on a chemical weapons ban for years because of disagreement over verification. During this period, the United States has deliberately done nothing to improve its stockpile of chemical weapons, the primary US deterrent to chemical warfare. Despite the fact that agent and munition deterioration have continued to degrade capability, the United States has followed its policy of unilateral restraint in the hope that the Soviets would reciprocate and that it would lead to progress in disarmament negotiations. It now seems clear that neither objective has been attained. In fact, the only result is that a serious gap in US and NATO deterrence has been created, one which completely undermines the concept of flexible response. For, given the existing situation, it is unlikely that a large-scale, one-sided use of chemical weapons by the Soviets could be effectively countered by US and NATO forces without escalation to nuclear weapons. Further, in a Soviet nuclear attack, their concurrent one-sided use of chemical weapons would be essentially a no-risk means for acquiring additional and significant military advantage.²²

**CONGRESS MAY
BE READY TO ACT**

Given the present situation, some

observers are saying that the United States clearly has no choice but to improve its deterrent to chemical warfare. A modest first step in this direction was taken by the US Congress on 25 June 1980 when the House of Representatives approved a 1981 Military Construction Appropriations Bill and sent it to the Senate. Included was initial funding for construction of a facility which could—if completed and if separate production approval were subsequently provided—produce binary chemical weapons. The committee report which accompanied the legislation said that this money “was included in response to Soviet chemical warfare activities” and that, although the United States has not produced chemical weapons since 1969, “the Soviets have continued to develop, produce, and stockpile them.”²³

Even this tentative measure by the House of Representatives may be stillborn, for the bill must pass the Senate and a House-Senate conference committee. It appears that there may still be a sufficient lack of understanding of the subject on both sides of Capitol Hill to kill it. Senator Hart of Colorado says, “The money will face resistance in the Senate.”²⁴ Representative Schroeder, also of Colorado, suggests that if the Soviets choose to be “bullies” and “international outlaws,” then we should let them.²⁵

In addition, development of a reasonable US deterrent capability may be thwarted because of the influence on Congress of a small number of well-meaning but dangerously idealistic members of the scientific community. Notable among them is Dr. Matthew Meselson, a Harvard University professor of biochemistry and molecular biology. Dr. Meselson served as a consultant to the US Arms Control and Disarmament Agency during the period when the United States unilaterally renounced biological warfare and when the Biological Weapons Convention was drafted and signed. He is frequently called upon to testify before Congress “because of his unique ability to draw scientific and strategic data into comprehensive policy recommendations for

the Congress.”²⁶ (Indeed, some would say that it has been the ideas of Dr. Meselson and other like-minded “experts” which have guided US actions in this area for the last 10 years.) Dr. Meselson observes that, regardless of what “the newspapers and chemical warfare enthusiasts” are saying, there is “no hard evidence” that the Soviets are using chemical weapons or “even that they have large quantities of them.”²⁷ Although the value of chemical weapons is very low according to his estimate, he concedes that they could kill numbers of civilians in a European war and that we should therefore “be prepared to defend ourselves.” However, he continues, the United States should turn over the question of what to do with its present stockpile of chemical weapons to the “arms control experts” in the hope that perhaps “the destruction of some symbolic quantity might help us obtain a treaty.”²⁸

It appears that no amount of evidence will alter such an individual’s concept of reality.²⁹ While the value of the current US stockpile of chemical weapons may—owing to years of deliberate neglect—be low, especially in terms of usefulness to deter, there is certainly no evidence that the Soviets entertain similar reservations concerning the value of their own chemical capability. The admission that chemical warfare in Europe could kill many civilians would by itself seem to be a compelling argument for a credible nonnuclear deterrent to Warsaw Pact initiation of chemical warfare.³⁰ Further, anyone who has spent an extended period of time in chemical protective gear while engaging in combat-associated activities would be among the first to attest that defensive measures alone, no matter how good they are, will not suffice against a one-sided chemical attack in which the attacker is not similarly encumbered. And, since by some accounts the only activity related to the US stockpile for many years has been at best “maintenance without improvement,” and at worst the destruction or demilitarization of some of the more obsolete munitions, it is unlikely that destruction of an additional

portion of the stockpile will help us to obtain an effective treaty any more than our previous unilateral actions have.³¹

NO MORE BUSINESS AS USUAL

Recent events thus indicate that, at least in the chemical weapons area, we can no longer afford business as usual. The old arguments which have brought the United States to its present deplorable plight as regards its inability to deter chemical warfare now seem to have been fully discredited. The Soviets have not matched US restraint with chemical weapons. They have not agreed to those verification measures essential for an effective chemical weapons disarmament agreement. They apparently do not appreciate repeated insistences by optimistic Westerners that their huge chemical stockpile does not have any military utility. They have again shown their disdain for, and lack of sensitivity to, world opinion. They have given no evidence that they are seriously disturbed by accusations of "international outlawry." They have engaged in activities that appear to violate an existing arms control agreement as well as international law, and they have then lied about it. Thus, the often-asked question of whether they would adhere to international law and honor international agreements in time of war seems to have been answered in the negative once again.³²

In view of the mounting evidence, the United States must:

- *Take action to improve its stockpile of chemical weapons—the major component of its deterrent to chemical warfare.* The most practical course of action, in view of the limited deterrence potential of the present US chemical weapons stockpile and the many disadvantages associated with conventional chemical weapons (e.g. storage and safety problems), is to undertake a binary chemical weapons production program without delay. Such action is clearly needed to reestablish deterrence through a credible threat of retaliation in kind so as to reduce the advantages which the Soviets might gain by using their chemical weapons unilaterally in a

war in Europe and to better enable the United States and NATO to deal with such an eventuality. This action would have only a modest cost. The alternatives could be nuclear war or defeat in a conventional war with the Soviet bloc.

- *Take action to assure that the arms control aspects of chemical weapons are brought back into balance with military realities.* Action to improve the US chemical deterrent stockpile is essential for obtaining Soviet concessions on such key negotiating issues as on-site verification. Without it, the United States will continue to disarm unilaterally through time-degradation of its stockpile, while the Soviets continue to arm, lacking any incentive to make what for them would be historic affirmative decisions with respect to verification:

The Russians are not persuaded by eloquence or convinced by reasoned arguments. They rely on what Stalin used to call the proper basis of international policy, the calculation of forces. The only way of changing their purpose is to demonstrate they have no advantageous alternative.³³

At the same time, the binary chemical weapons program should be tailored to accommodate the US negotiating position during the continuing chemical weapons disarmament negotiations. The United States should clearly indicate to the Soviets that the program is not an effort to obstruct the negotiations and that the United States will promptly terminate it when an acceptable agreement has been reached. However, it must be understood that while the United States is willing to continue to negotiate, it is not willing to accept an agreement that does not provide for on-site verification; the agreement must be one that would truly improve our security and that of our allies.

- *Take action to obtain additional facts concerning the use of chemical weapons in Southeast Asia and Afghanistan as well as the Sverdlovsk incident.* Every effort should be made to have independent international investigations undertaken.³⁴ The facts presently in hand should be made available to

the international community so that others may consider the implications of these recent events which bode ominously for all existing and future international arms control and disarmament agreements with the Soviet Union. Throughout, the United States must bear in mind that the manner in which it handles these reported violations of international law and agreements will set important precedents for the future. Failure to establish appropriate procedures for dealing with them or failure to take action commensurate with their import will communicate all the wrong messages to the international community in general and to the Soviet Union in particular. As Henry Kissinger has cogently remarked:

The Soviet leadership is burdened by no self-doubt or liberal guilt. It has no effective domestic opposition questioning the morality of its actions. The result is a foreign policy free to fill every vacuum, to exploit every opportunity, to act out the implications of its doctrine. . . . I [do] not accept the proposition that unilateral restraint in weapons procurement on our part would evoke a comparable response from the Kremlin. . . . Soviet leaders [are] likely to interpret such steps less as gestures of conciliation than as weakness. . . .³⁵

NOTES

1. Amoretta M. Hoeber and Joseph D. Douglass Jr., "The Neglected Threat of Chemical Warfare," *International Security*, 3 (Summer 1978), 55.
2. See Charles H. Bay, "The Other Gas Crisis: Chemical Weapons—Parts I and II," *Parameters*, 9 (September 1979), 70-80, and 9 (December 1979), 65-78.
3. US Congress, House, Committee on Foreign Affairs, Subcommittee on International Security and Scientific Affairs and on Asian and Pacific Affairs, *Hearing, Strategic Implications of Chemical and Biological Warfare*, 96th Cong., 2d Sess., 1980, p. 11. Hereafter cited as *Hearing, Implications*.
4. Charles W. Lewis et al., *Final Report of Department of the Army Surgeon General Investigative Team: Use of Chemical Agents Against the H'Mong in Laos* [undated, but written soon after 12 October 1979], pp. 4-5. See also US Congress, House, Committee on Foreign Affairs, Subcommittee on Asian and Pacific Affairs, *Hearing, Use of Chemical Agents in Southeast Asia Since the Vietnam War*, 96th Cong., 1st Sess., 12 December 1979, pp. 19, 21, 23-24.
5. *Hearing, Implications*, p. 12.
6. "Are Russians Using Poison Gas in Asia?" *The Christian Science Monitor*, 11 March 1980, p. 3.
7. "Doc: Viets Using Poison Gas on Rebels," *The New York News*, 23 March 1980, p. 8.

8. *Hearing, Implications*, p. 13.
9. *Ibid.*, pp. 14-16.
10. *Ibid.*, p. 14.
11. "Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxic Weapons and on Their Destruction," signed at Washington, London, and Moscow, 10 April 1972.
12. Alva Myrdal, *The Game of Disarmament: How the United States and Russia Run the Arms Race* (New York: Pantheon, 1976), p. 276.
13. Typical of these was "New War Germs 'Bred in Russia,'" *The Times* (London), 31 January 1978, which discussed heavily guarded "biological research and production centers." Similar accounts have been carried in US newspapers.
14. Bernard Gwertzman, "Soviet Mishap Tied to Germ-War Plant," *The New York Times*, 19 March 1980, p. A1.
15. "What is Siberian Ulcer Doing in Sverdlovsk?" *Science*, 4 April 1980, p. 37. See also "1,000 Are Said to Die in Soviet Accident," *The New York Times*, 16 July 1980, p. A7.
16. "A Case of 'Siberian Ulcer,'" *Newsweek*, 31 March 1980, p. 37.
17. "Kremlin Confirms Epidemic, Denies Link to Weapons," *The Washington Post*, 21 March 1980, p. A28. Several experts with the Defense Intelligence Agency have concluded that "so much anthrax was being produced at Sverdlovsk that it only could have been intended for 'offense' use, not for laboratory research on how to defend the country against the deadly germs." And if casualties were as high as 1000, "clearly . . . there would have been more anthrax produced than needed for any laboratory purposes" ("Soviets May Have Violated 1975 Germ Warfare Pact," *The Washington Post*, 29 June 1980, p. A19).
18. "Anthrax Outbreak Linked to Blast," *The Salt Lake Tribune*, 30 June 1980, p. A6. For the text of the subcommittee report, see "Soviet Biological Warfare Activities," *A Report of the Subcommittee on Oversight, Permanent Select Committee on Intelligence, US House of Representatives* (Washington: GPO, June 1980). See particularly p. 5. Pulmonary anthrax and intestinal anthrax have quite different symptoms, and the former is far more deadly. In fact, pulmonary anthrax would make a good biological warfare agent. It is "not contagious and thus [involves] no risk of spreading to one's own troops . . . [; it] is highly stable against sunlight, changes in temperature, or [other] shocks and hence lends itself to a long shelf life. It cannot be filtered out by the nose and a massive dose is very lethal" ("Soviets May Have Violated 1975 Germ Warfare Pact," *The Washington Post*, p. A19).
19. *Hearing, Implications*, p. 53.
20. Foreign Broadcast Information Service, *Daily Report, Soviet Union*, 10 January 1978, p. A2.
21. It is interesting to note that President Carter said in February 1980 that the United States would be glad to pursue progress in arms control with the Soviet Union after Soviet troops had been withdrawn from Afghanistan ("US Anxious to Pursue Arms Talks with Russia," *The Salt Lake Tribune*, 17 February 1980, p. A16 [emphasis supplied]). Even though the troops remain, the bilateral chemical talks have resumed amid allegations of Soviet chemical weapons use and their unsatisfactorily answered questions concerning compliance with the Biological Weapons Convention. One wonders why, at the least, continuation of these talks was not made contingent on both restraint and provision of some answers.
22. Space does not permit a full exposition of the nature and meaning of the threat posed by the chemical warfare capability of the Soviet Union and Warsaw Pact. Interested readers will find these matters dealt with in much greater detail in "The Other Gas Crisis: Chemical Weapons—Parts I and II."

23. "House OKs Military Funds Bill," *The Salt Lake Tribune*, 28 June 1980, p. A1.

24. "Colorado Solon Vows Fight to Halt Funding for 'Weteye' Replacement," *The Salt Lake Tribune*, 12 June 1980, p. B5. As this article goes to press, prospects for US construction of a binary nerve gas production facility have brightened considerably. The House on 10 September 1980 and the Senate on 16 September approved funds for such construction. Even if the funds are eventually appropriated and the facility is built, however, actual production of binary agents could not begin until the President certified a national security need. See A. O. Sulzberger Jr., "Senate Passes Funds for Nerve Gas Unit," *The New York Times*, 17 September 1980, p. A19.

25. "MacNeil-Lehrer Report," Public Broadcasting System, 29 May 1980.

26. *Hearing, Implications*, p. 2.

27. "MacNeil-Lehrer Report." Dr. Meselson presumably and regrettably refers to anyone who believes the United States should have chemical weapons for deterrence purposes as an "enthusiast." In actuality, no serious American is "enthusiastic" about the prospect of chemical warfare; rather, it is a question of how best to deter it and, if necessary, respond to it. It is the considered judgment of many (including military professionals who have the responsibility for fighting and not losing the next war) that chemical weapons are the best deterrent to chemical warfare and the best nonnuclear answer to a Warsaw Pact use of chemical weapons in Europe.

28. "MacNeil-Lehrer Report."

29. "MacNeil-Lehrer Report." During recent congressional hearings, Representative Leach of Iowa commented that he "has to think that what we have is a situation somewhat reminiscent of World War II. No one in the State Department and no one in the White House ever saw a person gassed at Auschwitz, but we know it occurred." Representative Leach found Dr. Meselson's references to "unconfirmed allegations" of the use of poison gas disturbing. "I think there is a very important place in academia for scientific skepticism," he said, "but sometimes skepticism can be blinding" (*Hearing, Implications*, p. 46).

30. Of course there would be civilian deaths from Soviet chemical weapons use, just as there would be from their use of conventional or nuclear weapons. However, if Soviet use of

chemical weapons can be successfully deterred, civilian casualties would be correspondingly fewer.

31. George S. Brown, *United States Military Posture for FY 1979*, p. 90. Congressional reports and open hearings, press reports, and a vast range of articles and published data on US military chemical warfare programs are available to all. The Soviets have undoubtedly availed themselves of the informational opportunities offered by our open society.

32. The use of Soviet-supplied chemical weapons by military proxies in Southeast Asia or Soviet troops in Afghanistan would not technically represent violations by the Soviets of the 1925 Geneva Protocol, the only existing international agreement in this area. By Soviet reservations in their acceptance of the Protocol, they have stipulated that the provisions of the agreement are "only binding on the Government of the USSR as regards those Powers and States which have . . . signed and ratified the Protocol. . . ." Laos, Cambodia, and Afghanistan are not parties to, nor have they acceded to, the Geneva Agreement. However, the US State Department believes that the Protocol has become a part of international law and is binding on all states irrespective of reservations. The Soviets seem to agree in that their representative to the Geneva Conference of the Committee on Disarmament said in 1971 that "the socialist countries consider that the prohibition of the use of chemical and bacteriological weapons is a generally recognized rule of international law" and explicitly denied that this prohibition should be seen as limited to Protocol parties (*Hearing, Implications*, p. 49). A violation of the international Biological Weapons Convention speaks for itself.

33. "Summit Gave No Long-Term Solutions," *The Salt Lake Tribune*, 6 July 1980, p. A18.

34. Interestingly, the United States approached the UN Human Rights Commission in March 1980 in an effort to obtain support for an independent international investigation, but was turned down. Perhaps the international community is sufficiently cynical with respect to Soviet behavior as to believe such an investigation would be fruitless. One cannot but wonder whether the reaction would have been different had it been a Soviet request regarding allegations of US violations.

35. Henry Kissinger, *The White House Years* (Boston and Toronto: Little, Brown, 1979), pp. 116, 203.

