Chemical Weapons Pact Edging Closer

Recent concessions by the Soviet Union on key points have left verification of clandestine production as the principal area of outstanding disagreement between the two superpowers

Geneva

An outline agreement on an international convention banning the development, production, and use of chemical weapons could be reached within the next 12 months, according to Western diplomats currently engaged in negotiating such an agreement here.

Achievement of that goal, however, will depend almost entirely on whether the United States and the Soviet Union can bridge the significant gap that still exists between them over the procedures to be used for the rapid investigation of complaints of possible treaty violations—the so-called "challenge inspection."

Sufficient progress has been made in negotiations among the 40 nations represented in the United Nations Conference on Disarmament to have reached a convergence of views on some key points relating to verification. In the words of the head of the British delegation, Ian Cromartie, these include the recognition that "a very short time scale" is needed to resolve any accusation of a treaty violation, "both for reasons inherent in the nature of chemical weapons as well as for wider political reasons."

At present, however, the United States continues to stand firmly by its requirement, first put forward in proposals submitted by Vice President George Bush in April 1984, that outside inspectors must be able to visit any facility suspected of carrying out the clandestine production of chemical weapons on, at most, 48 hours' notice.

In contrast, the Soviet Union still argues that a signatory state should be allowed to refuse comprehensive access to certain militarily sensitive installations. It has recently accepted the need to respond to challenges, however, and has suggested some procedures by which a suspect installation might be checked indirectly.

The difference between the two superpowers on the question of verification is the last major hurdle standing in the way of the successful completion of a convention, which has been under negotiation in an ad hoc committee of the Conference on Disarmament since 1980 in parallel with bilateral negotiations between the United States and the Soviet Union.

After several years of desultory progress, both sets of negotiations received a new impetus 18 months ago at the Geneva summit meeting between U.S. President Ronald Reagan and Soviet leader Mikhail Gorbachev, when each side agreed to accelerate efforts to conclude a treaty banning chemical weapons.

Since then, and particularly over the past year, Western diplomats say that the Soviet Union has been taking the negotiations seriously. It has upgraded the members of the negotiating team and made some shifts in its negotiating position that have brought it much closer to the proposals being advocated by Western nations. In particular, it has moved significantly on two of the three points that U.S. negotiators were saying last fall remained major obstacles: the monitoring of the production of "supertoxic" chemicals for civilian use, and the declaration of existing weapons stockpiles.

If agreement on verification can be reached, other outstanding problems could quickly be resolved.

Last November, for example, the Soviet Union suggested a series of measures for monitoring civilian chemical plants that bore a close resemblance to those that had been previously proposed by Western nations but were rejected by the Soviets as excessive.

The current suggestion, which has now in principle been endorsed by all sides, is for an international inspectorate, similar to that created by the International Atomic Energy Agency in Vienna for nuclear technology, which would be empowered to keep a constant watch on all civilian chemical facilities to ensure that no misuse was taking place.

On 17 February, further important concessions were revealed when the Soviet Union announced for the first time that it was prepared to provide full details of the location and composition of all existing chemical weapons stocks shortly after any convention was signed. Previously it had proposed that this could be done over an extended period.

The willingness of the Soviets to shift from their previous hard-line positions on such topics has raised hopes that an agreement may be in prospect. However, their recent concessions are also being seen by some in Geneva partly as a negotiating tactic designed to encourage return concessions from the United States on the problem of challenge inspections. "The technical problems are well on the way to being solved. We are now eyeball to eyeball on the fundamental political question of verification, and that is still likely to take some time to resolve," says one Western negotiator.

The dilemma is straightforward. All those involved in the current negotiations agree that a treaty will be acceptable only if it includes inspection measures effective enough to discourage cheating. Many countries, however, have difficulty in accepting the U.S. proposal since it would give international inspectors almost immediate access to any public or private facility, regardless of military or commercial significance, on the basis of a claim that it was involved in the production of chemical weapons.

Representatives of the West German chemical industry, for example, have argued that such a provision in the treaty could be used as a vehicle for gaining access to details of processes that are being kept secret for commercial reasons. Indeed, some people question whether even the United States would be prepared, in practice, to accept the verification conditions it is proposing.

Last summer, in an attempt to bridge the gap between the U.S. and Soviet positions, Britain put forward a procedure that would give a challenged state 1 week to produce sufficient evidence to convince outside inspectors that it was not cheating.

Soviet officials, when talking in broad

terms, have said they are prepared to accept a compromise along the lines of the British proposals. Chief negotiator Yuri Nazarkin, for example, suggested last month a set of "alternative measures" to direct inspection, such as collecting chemical samples outside a suspect facility. At the same time, however, they have continued to insist on a signatory's right to refuse access to certain facilities.

U.S. negotiators, in contrast, while describing the British proposal as a "constructive contribution," are still sticking to their 1984 demand for a mandatory, 48-hour-notice inspection. "Whether the United States is going to move at all from their position is now the $64,000 question," says a European diplomat.

If agreement on verification procedures can be reached, then most participants in the chemical weapons convention are confident that other outstanding issues of disagreement would rapidly fall into place. These include the voting procedures to be adopted by the international committee established to oversee the operation of the convention.

The feeling in Geneva is that much now depends on a variety of external factors. One is the possibility that the Reagan Administration may come to believe that a chemical weapons convention would be a politically useful arms control agreement to have secured during an election year.

A second factor, according to some diplomats, is whether the West perceives a "window of opportunity" in its negotiations with the Soviet Union, which could close if the military establishment there feels that Gorbachev has been giving too much away in his arms control negotiations for insufficient return.

Third, there is the potential impact of the start-up of binary weapons production in the United States, currently scheduled for October. Kenneth Adelman, the head of the Arms Control and Disarmament Agency, has recently reiterated the Administration's argument that the production of binaries should go ahead, even with a ban in prospect, "to ensure that our negotiators' hands are not empty." Some feel that the initiation of production could lead the Soviets to withdraw from the Geneva negotiations.

Finally—and perhaps least predictably—there is the impact of the new talks designed to eliminate medium-range nuclear missiles in Europe, a move that has focused attention on the East-West balance of conventional forces and chemical armaments. Already France has announced that, in the light of what it considers to be a growing chemical threat from the Soviet Union, it intends to start the production of chemical weapons as a "dissuasive force." ■ DAVID DICKSON

Politics of the Genome

Since the initiative to sequence the human genome first became exposed to public discussion, which effectively began at last summer's Cold Spring Harbor Symposium, enthusiasm for embarking in the near future on a full-scale sequencing effort has waned in favor of the more modest short-term goal of genetic and physical mapping of the genome. In the public domain at least, that trend continues, as evidenced by the discussions at the second meeting of the National Academy of Sciences (NAS) committee on the genome project. However, one notable absence from the gathering was Walter Gilbert, who recently resigned from the committee in order to pursue his plans to establish a private company, Genome Corporation, that would push ahead rapidly with both mapping and sequencing. Gilbert, who is at Harvard and was for a time chairman of Biogen, hopes to combine this joint experience in a venture that would, he said, be selling genetic information.

Gilbert's departure from the NAS committee has, for many people involved, produced a more balanced approach to the committee's stated objectives, in which a complete sequence of the genome's 3 billion bases is described as "a subsidiary goal." For more than a year Gilbert has been attempting to raise private funds to establish what he termed the "Human Genome Institute," whose activities would include development of new technologies but would be aimed at both mapping and sequencing in the short term. He plans to have a physical map within a year of start-up and major regions sequenced within 3 years.

These figures caused raised eyebrows at the Academy's gathering, being considered to be rather optimistic. By contrast, the committee was talking in terms of a genetic map (which is related to the physical map) being produced over a period of 5 years, and at a cost of $100 million. And major forays into sequencing are thought best delayed until faster and cheaper methods have been developed.

As the technical debate is being honed, so too is political sensitivity, both in terms of potential congressional response to the project and the interagency tensions that are developing over how funding for the various components of the project might be organized. James Wyngaarden, director of the National Institutes of Health (NIH), told the NAS committee that during hearings on the institute's current budget proposals, positive comments are already being made about the scope of the human genome project, both in terms of benefits and costs. And Robert Cook-Deegan, who is heading an Office of Technology Assessment report on the genome project, said that some congressmen are interested in the project as a potential boost to American competitiveness in biotechnology.

Biologists can be encouraged by these sentiments, said Cook-Deegan, but, he warned, the process of going to Congress with major initiatives in science is extremely unpredictable, no matter how meritorious the project may be. A great fear, repeatedly expressed, is that Congress will warmly embrace the proposal but will not appropriate sufficient new funds to cover it: funding agencies, particularly NIH, might then be left with no political option but to squeeze existing projects to pay for genome mapping and sequencing. Nevertheless, it is not at all clear that sufficient enthusiasm has yet been engendered in Congress to ensure successful passage for a human genome proposal, quite apart from the vagaries of the system.

A second fear, expressed strongly by David Botstein of the Massachusetts Institute of Technology, and James Watson of Cold Spring Harbor Laboratory, concerns the quality of the work that might be funded. Specifically, although participants said that they were comfortable with the peer-review system that operates for NIH research grants, they were less sanguine about quality control for work funded by the Department of Energy (DOE) and carried out in its laboratories. The DOE, although it is the chief instigator of the current genome project and has already committed considerable funds to it, is seen by some members of the biological community as having strayed into their territory. Tensions over academic standards will therefore add to the already established turf battles between the two major agencies. If, as seems likely, the genome project does proceed as some kind of coordinated, interagency venture, then the disparity in the different systems that are in place at NIH and DOE for assessing research proposals and research contracts will probably be modified. ■ ROGER LEWIN