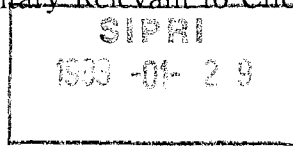


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CHEMICAL WEAPONS CONVENTION BULLETIN

News, Background & Commentary Relevant to Chemical Weapons & Chemical Arms Control



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THE 1993 CHEMICAL WEAPONS CONVENTION A Summary

The Chemical Weapons Convention is to be opened for signature in Paris during 13-15 January 1993. Of unlimited duration, it will enter into force 180 days after 65 states have ratified their signatures, but no earlier than January 1995. A Preparatory Commission will have been operating in the meanwhile. The text of the treaty comprises a preamble, 24 articles and three annexes, these running to just over 50,000 words in the English version and occupying 170 pages. The main provisions are as follows:

The prohibitions. Each State Party undertakes never, in any circumstances, to:

- develop, produce, otherwise acquire, stockpile or retain chemical weapons, or transfer, directly or indirectly, chemical weapons to anyone;
- use chemical weapons, or engage in any military preparations for doing so; or
- assist, encourage or induce, in any way, anyone to engage in any activity prohibited by the treaty.

By "chemical weapons" the treaty means munitions or other devices specifically designed to cause death, temporary incapacitation or permanent harm to humans or animals through the action of chemicals on life processes. Such toxic chemicals on their own, as well as any other chemicals from which they can be made, are also defined by the treaty as "chemical weapons" - unless they are intended for purposes not prohibited by the treaty, as long as the types and quantities are consistent with such purposes. A "toxin" in the sense of the 1972 Biological Weapons Convention may also be a "chemical weapon" in the sense of this treaty. Toxicity to plants is not included in the treaty's definition of toxic chemicals, but the preamble expressly recognizes the prohibition in international law of the use of herbicides as a method of warfare.

The treaty lists the purposes it does not prohibit. They are industrial, agricultural, research, medical,

pharmaceutical or other peaceful purposes; purposes related to protection against chemical weapons; military purposes not connected with the use of chemical weapons; and law enforcement including domestic riot control. The treaty states explicitly that "riot control agents" (which it defines) shall not be used as a method of warfare.

The disarmament stipulations. Each State Party undertakes to destroy, within 10 years of the treaty entering into force,

- its chemical weapons;
- any production facilities it has designed, constructed or used at any time since 1 January 1946 to manufacture chemical weapons in quantities exceeding one tonne of chemical per year;
- any chemical weapons it abandoned on the territory of another State Party.

Each State Party undertakes to accept international procedures, as detailed in the treaty, for verification of this disarmament. These procedures will also place access to the weapons and production facilities under international control from the initial months of the treaty entering into force.

Destruction of chemical weapons must take place in designated and appropriately designed facilities. How exactly this is to be done is for each State Party to decide, except that dumping in any body of water, land burial or open-pit burning may not be

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used. The treaty discourages but does not exclude the possibility of a production facility being converted to peaceful use rather than destroyed. An extension of the destruction period of up to five years may be allowed in exceptional cases.

Relationship to the Geneva Protocol and the Biological Weapons Convention. The treaty does not affect obligations assumed under either the 1925 Geneva Protocol (which prohibits use of chemical and biological weapons) or the 1972 Biological Weapons Convention. States Parties that are also parties to the Protocol would remain bound by it if they were to withdraw from the treaty. The treaty's prohibition of the use of chemical weapons under any circumstances renders nugatory any right of retaliation-in-kind claimed by parties to the Protocol.

The supervisory bodies. The treaty establishes a new international body to oversee its operation, the Organization for the Prohibition of Chemical Weapons. The OPCW is to be headquartered in The Hague and financed by States Parties in accordance with the UN scale of assessment, except for its destruction-related work which, as a general rule, is to be paid for directly by States Parties necessitating it. The highest organ of the OPCW will be the Conference of the States Parties, which will generally meet once a year. The executive organ of the OPCW will be the Executive Council, comprising 41 States Parties selected from each of the five regional groups by decision of each group. The day-to-day work of the OPCW will be done by the Technical Secretariat, which is to include an Inspectorate and have a Scientific Advisory Board composed of independent experts.

Each State Party undertakes to institute national measures to enforce the treaty, including penal legislation extending to activities of its citizens abroad. In order to fulfil its obligations under the treaty, each State Party must also create a National Authority. These national bodies are to serve as focal points for

liaison with the OPCW and other States Parties.

Restraints on science, technology, industry and trade. The treaty extends to all toxic chemicals and their precursors, of which many millions are currently known. Fourteen families of them and another 29 individual chemicals are listed for international control by the OPCW.

Twelve are specified in 'Schedule 1', a status which effectively bans them from manufacturing industry and commerce. A State Party may possess no more than a tonne of Schedule-1 chemicals at any given time, and any production exceeding 10 kg per year must take place within the one specially designated Single Small Scale Facility that the treaty allows. These SSSFs are to be kept under close surveillance by the OPCW Technical Secretariat. All the principal nerve and mustard gases and other chemical-warfare agents are listed in Schedule 1.

The other chemicals listed for international control by the OPCW are 'dual use' in the sense that they have well-established peaceful applications as well as chemical-warfare ones. They are not made subject to production limits, but a quantitative threshold is set beyond which a facility producing one or another of them must be declared to the OPCW, and another threshold beyond which the facility becomes liable to routine on-site inspection by the OPCW. The aims, duration and possibility of recurrence of such inspection are greater for 'Schedule 2' chemicals than for 'Schedule 3' ones, the latter being produced in industry on a larger scale than the former. For Schedule 2, the reporting threshold ranges from one kilogram to one tonne per year, depending on the chemical, with the inspection thresholds ten times greater. For Schedule 3, the thresholds are 30 tonnes and 200 tonnes per year.

International transfers of Schedule-2 chemicals are to be prohibited except between States Parties once the treaty has been in force for three years,

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until which time the chemicals may be exported to non-parties only under end-use certification. Schedule-3 chemicals may be traded or transferred freely except that end-use certification must be obtained from non-party importers and except that States Parties are enjoined by the treaty to consider, after five years, whether further measures are needed. No role is specified for the OPCW in these transfer restraints.

All other plant sites where more than 30 tonnes per year of organic chemicals containing phosphorus, sulphur or fluorine are made, or ones making more than 200 tonnes per year of non-PSF organic chemicals, are also to be declared to the OPCW, except where the products are solely hydrocarbons or explosives. Such declared sites will become liable to routine inspection by the OPCW once the treaty has been in force for three years, unless the Conference of the States Parties expressly agrees otherwise. Depending on how many of these facilities and Schedule-3 ones a State Party declares, the OPCW may routinely inspect no more than 3-20 of them per year.

The treaty places no explicit restrictions on transfers of dual-use plant or equipment. It requires, moreover, that its provisions be implemented in a manner which avoids hampering the economic or technological development of States Parties. A State Party may nevertheless feel obliged to place national controls on the import or export of dual-use technology and chemicals as part of its general undertaking to implement the treaty's prohibitions.

Besides facility-specific data, the OPCW must also receive aggregate national data from States Parties each year on their production, import and export of scheduled chemicals. To this end, the National Authorities will have to impose reporting obligations, and associated validation procedures, upon research, industrial and trading concerns at quantitative thresholds substantially lower than those just noted.

Each State Party expressly undertakes to adopt measures necessary to ensure that toxic chemicals and their precursors are used within its jurisdiction only for non-prohibited purposes. The National Authorities may therefore be obliged to exercise general surveillance over unscheduled chemicals as well.

Verification of compliance. The treaty empowers the OPCW to operate two complementary systems for international verification of compliance. Under one system, routine verification, the Technical Secretariat receives data which States Parties have declared to the OPCW on particular topics specified in

the treaty. The Technical Secretariat then validates those data through on-site inspections. Such routines are laid down by the treaty for monitoring compliance with its bans on stockpiling, retention and production, as in the civil-industry controls just outlined. For the ban on development of chemical weapons, facilities that were once primarily used for such a purpose must be declared to the OPCW. States Parties must also make annual returns of information to the OPCW about their national programs related to protective purposes. The Technical Secretariat may seek clarifications from States Parties about any of their declarations, and it may receive communications from any State Party about implementation matters. Although the Technical Secretariat may not itself initiate inspections, except at declared sites, it must report to the OPCW Executive Council any doubts it may have about compliance.

Under the other system, verification by challenge, States Parties have undertaken to admit OPCW inspectors to any site at which another party has requested an inspection in order, solely, to resolve questions of possible noncompliance. The treaty places certain limitations upon this challenge process so as to reduce its potential for abuse or intrusion into domains of legitimate privacy. A period of up to 120 hours may elapse before a challenged State Party has to grant access to a challenged site after being notified of the challenge; and it may 'manage' the access, as by shrouding site equipment, to protect secrets. The possible time-lapse in regard to declared facilities is shorter. The treaty does not exclude the possibility of a State Party initiating a challenge inspection against itself, should it wish to demonstrate its compliance.

Compliance with the prohibition of use of chemical weapons is to be verified by the OPCW through a modified form of challenge inspection. Should states not parties to the treaty be involved in allegations of use, the OPCW is to cooperate with the Secretary-General of the United Nations, which has its own investigatory procedures for alleged violations of the 1925 Geneva Protocol.

Sanctions and assistance against non-compliance. Technical-Secretariat reports on challenge inspections, as well as reports on routine inspections that have raised doubts about compliance which the prescribed consultative clarification procedures do not resolve, are to be passed to the Executive Council, which must then consult with the States Parties involved. If the Executive Council finds it appropriate to do so, it must then set a deadline within which an apparently non-compliant State Party must take measures to redress the situation. Beyond that point, the

Executive Council may refer the matter to the Conference of the States Parties, with or without recommendations. The Conference may then decide to recommend collective measures to States Parties – in other words, to recommend that they impose sanctions.

In cases of particular gravity, both the Conference and the Executive Council are empowered to bring the issue to the UN General Assembly and the UN Security Council.

The treaty creates an obligation upon States Parties promptly to provide assistance to a State Party that requests it. A State Party may request assistance if it has been attacked with chemical weapons or if it believes itself threatened by activities of a kind that would violate one or another of the main prohibitions of the treaty. The treaty establishes a voluntary fund and specifies procedures for the rapid provision of protective equipment, antidotes and other assistance to a requesting State Party.

Reviewing and amending the treaty. So as to review the operation of the treaty taking into account scientific developments, the Conference of the States Parties is to convene in special session at five-yearly intervals.

Amendments to the treaty may be proposed by any State Party at any time. Articles of the treaty can be changed only by majority vote of all States Parties, if there are no negative votes, at a specially convened Amendment Conference. A simpler procedure is available for changes to the annexes of the

treaty that would modify technical or administrative provisions, including the Schedules of controlled chemicals. For acceptance, each such proposed change requires a positive recommendation from the Executive Council acting on an evaluation by the Technical Secretariat; it will then automatically be adopted if no State Party objects within 90 days. Should there be an objection, the proposed change would then go before the next regular session of the Conference of the States Parties, where adoption, as on any matter of substance, would require a two-thirds majority of members present and voting.

Reservations to the treaty may be entered only in regard to the annexes, not the articles. They may not be incompatible with the object and purpose of the treaty.

Public information. There is to be a stringent classification and security regime for OPCW data and documents. Information about implementation of the treaty, other than information of a general kind approved for release at the political level of the OPCW, is not to be disclosed to the general public except with the express consent of the State Party to which it refers. In cases where the "needs of the Convention" require it, classified information may be released according to procedures which the Preparatory Commission will be proposing.

But States Parties – meaning the National Authorities – are to be provided routinely by the OPCW with the data they require in order to be assured that other parties are in continued compliance. Such data are defined to include all the information which the treaty requires States Parties to declare. ■

From Negotiation to Implementation of the CWC

by Dr. Josef Holik

Commissioner for Disarmament and Arms Control, Federal Republic of Germany

In January 1989, 149 nations joined at a conference in Paris to launch an appeal for the complete prohibition of chemical weapons.

In November 1992, the UN General Assembly adopted by consensus a resolution co-sponsored by the 145 nations endorsing the Draft Chemical Weapons Convention and calling all states to become original signatories.

In January 1993, almost precisely four years after the first Paris conference, the signing ceremony for the CWC will again bring together the majority of these nations which, by their signature of the Draft

Convention, will initiate the process of finally establishing the international instrument awaited by mankind for such a long time: the Organization for the Prohibition of Chemical Weapons.

It might appear as if the process from the first Paris conference to the signing conference had been smooth and straightforward. In reality, it was only the last part of a decade of long, extremely complex negotiations with many ups and downs, plenty of frustration and serious doubts about whether they would ever produce the desired result.

The Geneva Conference on Disarmament had

labored with the task for almost 10 years. Over many years the antagonisms appeared insurmountable: East-West confrontation and North-South distrust combined with the sheer technical magnitude of the task of banning a whole category of weapons of mass destruction. The fact that CW are produced from substances which also provide the basis for a very important sector of the civilian economy, the chemical industry, made it a unique challenge.

The shock of chemical weapons being actually used during the Iran-Iraq War and the great danger of their use during the Gulf War dramatically increased the urgency of completing the CWC.

This, however, would not have been possible if the East-West situation had meanwhile not dramatically turned towards the better and if constant efforts in the CD had not gradually convinced all partners in the negotiation that a non-discriminatory and cooperative solution for the elimination of chemical weapons seemed possible.

Many efforts by all participating countries, members and observers, were necessary - from the tabling of CD 500, the first American proposal for the Convention, introduced by then Vice-President Bush in 1984, to the initiative of President Bush of 13 May 1991 which finally made it possible to agree upon the prohibition of use of CW under any circumstances. The negotiating routine of years, the difficult often interrupted schedule of the CD's work, and the frequent change of negotiators made it doubtful whether a successful conclusion was possible at all.

Ad-hoc committee chairmen, Working-group chairmen, "friends of the chair" and all negotiators and experts gradually over many years patiently and diligently contributed to the thorough discussion of possible solutions. The "rolling text", updated once or twice a year, grew and contained more and more intelligent proposals. However, it also grew to become a maze of brackets and footnotes embodying all the concerns and questions which accompanied the negotiating process. Thus it became increasingly difficult to discover clear outlines of a convention.

When Ambassador von Wagner, the German head of delegation at the CD, became chairman of the ad hoc-committee for 1992, he was faced with high expectations. The CD had committed itself to a successful conclusion in 1992. However, the rolling text seemed as intractable, the problem as almost insurmountable as ever.

In this situation, it was an Australian initiative that paved the way towards the endgame. Australia's

"Model CW Convention" was the first example of a comprehensive and coherent treaty text free from all alternative language, brackets, and footnotes. Presented by Australian foreign minister Gareth Evans to the CD on 19 March 1992, it greatly increased confidence that a compromise could be found. Ambassador von Wagner received the mandate to produce a "chairman's draft". Between March, the presentation of this text on 22nd June and the 3rd of September 1992, when the CD transmitted the Draft Convention to the United Nations, a very intensive process of scrutiny and frantic negotiations took place in Geneva and in the capitals of member countries. A great amount of elaboration and discussion was needed at this stage. Many bilateral efforts to overcome problems and find solutions were undertaken. I personally travelled to a good number of countries to discuss the chairman's draft. The conclusion of the negotiating process in Geneva and the broad support in the 47th UNGA leading to an adoption by consensus are the final steps in the elaboration of the Chemical Weapons Convention.

What is the content of this document which has been able to collect so much support?

The CWC is based on three sets of interlocking objectives which together provide the framework for the complete elimination of this horrible class of weaponry:

- the elimination of all stocks of chemical weapons within 10 years (with an option for extension by 5 more years in case of demonstrated necessity)
- the prohibition of use "under any circumstances", a huge step beyond the Geneva Protocol of 1925 which, due to too many reservations, had been *de facto* reduced to a "no first use" norm.
- the prohibition of development, production, and transfer to make certain that CW stocks do not arise again.

These prohibitions would hardly be capable of giving confidence of compliance were they not backed up by an unprecedented, comprehensive verification regime.

Given the dual-use character of many chemicals, monitoring chemicals used for peaceful purposes was unavoidable. The CWC thus is the first multilateral arms control agreement covering a whole and particularly important branch of civilian economy: the chemical industry. The challenge was to organize this in a cost-effective and convincing way, avoiding undue interference with civilian industry. The result is a verification package consisting of monitoring and inspection provisions equally applying to all conven-

tion members which, although they need to be further elaborated in technical manuals, promise to do the job in an acceptable way. Backing up this so-called routine verification is the most important and most controversial element of verification: challenge inspections. Any member state may request a challenge inspection anywhere on the territory of any other member state to be conducted by the inspectorate of the international Technical Secretariat at short notice. This promises to be a most efficient tool to overcome suspicion of non-compliance. An elaborate system of procedures, most notably the British-designed concept of "managed access" provides confidence that this instrument is not misused. Routine verification and challenge inspection are equally applicable to all member states. They provide the nondiscriminatory framework which makes the CWC the first truly cooperative international multilateral arms control agreement. The equal obligations for all members appear as the best approach to overcome possible negative effects on trade, which might have been caused by the fight against CW proliferation with export controls, affecting even many non-proliferating nations. The commitment by the member states of the Australia group to review their measures in the light of the implementation of the Convention will ensure consistency with the CWC.

The great success of the CD in agreeing on the Convention and the admirable unanimity of the international community in agreeing to the negotiating result must not let us think that the task is done. Yes, it is true that blueprints are ready, but construction of the CWC edifice has now to begin in the Preparatory Commission. We can count on only two years before the future OPCW has to be operational.

It was a great success of the negotiation to come to a swift decision between several excellent candidates for the seat of the organization. Now we know that The Hague, home of the International Court of Justice, will harbor a second institution important for keeping peace worldwide. The path towards the actual establishment of the OPCW will, however, still be long and require all our energies:

Within 30 days after the signing conference the Preparatory Commission will start its work. Whereas the CD had only 39 members, now all states signatories to the Convention can participate equally in the implementation of the CWC and in the build-up of the OPCW. International unanimity in the objective of banning chemical weapons will continue to be needed as the political driving force during its decisive phase ahead. The blueprint is excellent, but the workmanship in erecting the building needs to be of the same quality. A first class Technical Secretariat

staffed by committed personnel is of primary importance. Only with its help will the Preparatory Commission of state representatives be able, in the short period of only two years, to agree on the necessary organizational requirements and on all remaining technical and other regulations still required to implement the Convention.

Parallel to building up the international Organization, preparatory work for implementation is necessary in each member state. To build up the national authority requested by article VII is a pioneer task. It will require organizational efforts at the national level and will benefit from bi-lateral, regional and international sharing of information and experience in order to arrive jointly at the designated objective in the most efficient way.

For the states who declare chemical weapons the obligation to destroy all stocks is the most important element of initial implementation. Russia as successor of the Soviet Union has the most complicated task with the destruction of 40,000 tonnes of chemical weapons. This is particularly true in the difficult situation in which Russia finds herself at the moment. Together with other countries, first of all the United States, Germany has agreed to provide expertise and, in a modest way, financial help. Of course it is the responsibility of each country to fulfill its obligations under the Convention. The spirit of cooperative endeavor which is the basis of the CWC must prove itself, however, in practical cooperation. Germany sees its implementation and preparatory work guided by this principle. This is why we also have started a training program for future CD inspectors from developing countries and intend to undertake trial inspections and further preparatory work with other signatories.

In this spirit we are convinced that the complete elimination of chemical weapons can at the same time be a first but important step to build up confidence between member states far beyond the immediate application of the Convention: In particular the verification mechanism can contribute to this by dispelling doubts about the intention of other countries, thus reducing one of the most important factors of the international arms build-up: concern about a neighbor's activities caused by lack of reliable information on real intentions.

After the success in Geneva and in New York we are now looking forward to work together in The Hague: to contribute to international peace by building a world community free of chemical weapons. ■

What follows is taken from the Sussex-Harvard rolling CBW chronology. The intervals covered in successive Bulletins have a one-month overlap in order to accommodate late-received information. The basic chronology, which is continuously updated, is fuller and provides complete citations of sources. For access to it, apply to Julian Perry Robinson at the Science Policy Research Unit, University of Sussex, Brighton, BN1 9RF, England.

3 August UN Human Rights Commission special rapporteur Ambassador Max van der Stoep submits a report to the UN Security Council on violations of human rights in southern Iraq {A/47/367}. His submission speaks of "a sudden increase of reports, emanating from a wide variety of sources, of a renewed policy of aggression against the marsh Arabs". The Iraqi government is accused of burning reed beds, using defoliants and draining the marshes so as forcibly to relocate the marsh Arabs [see also 26 Jul]. The report calls for "immediate concrete measures in response to the violations". {Guar 20 Aug}

3 August US Army Dugway Proving Ground publishes in draft, for comments within 30 days, an environmental assessment of its Baker Test Facility. This action satisfies part of the settlement agreed between the Defense Department and the Foundation on Economic Trends after the foundation had sued the department for violating environmental laws in its Biological Defense Research Program [see 19 Nov 91]. In the environmental assessment, it is stated that Baker Test Facility had been built in 1952 [see also 9 May] "as a model structure for biological warfare testing", its mission being limited in 1969 to the testing of biological defense equipment, whereafter a "low level of activity ensued until a renewed interest in the biological threat occurred in the early 1980s".

3 August In Los Angeles, California, the Simon Wiesenthal Center releases a special report prepared by the Paris-based *Middle East Defense News* describing Iran and Syria as independent producers of chemical weapons and giving much detail, sometimes attributed, about the CW programs of those countries and also of Libya {FR 3 Aug; JT 5 Aug}. French suppliers of dual-use technologies are depicted as having been particularly important in the Syrian program.

4 August In the CD Ad Hoc Committee on Chemical Weapons, Iran distributes a detailed paper on ethanolamines which argues against their inclusion in the draft CWC control schedules {CD/CW/WP.424}, as had been proposed in the last Rolling Text and as had now happened in the Chairman's draft. Iran also distributes a paper on the draft definition of chemical weapons. It draws attention to possible ambiguities in the term *specifically designed* in the expression "specifically designed to cause death or other harm through the toxic properties of...toxic chemicals" applied in Article II of the chairman's draft to munitions, devices and equipment that are thereby to fall within the scope of the CWC {CD/CW/WP.425}.

5 August In the CD Ad Hoc Committee on Chemical Weapons, Ambassador Nasseri of Iran makes a statement on behalf of the group of 14 states that had jointly submitted proposed amendments to the chairman's draft [see 24 Jul] com-

plaining that "the negotiations over the past few days have not succeeded in moving the process forward to any noticeable degree" but expressing readiness to "continue negotiations in an effort to arrive at the necessary consensus". {CWCB No. 17}

5 August The US Air Force announces, in *Commerce Business Daily*, that it will shortly be issuing a request for proposals for development and demonstration of warhead technology to defeat an adversary's CBW weapons, a 5-7 man-year effort being envisaged. An earlier notice, from the Air Force laboratory concerned, had announced that it was seeking Agent Defeat[ing] Warhead Technology sources "to develop and demonstrate technology to destroy, disable or deny an adversary his chemical weapons, biological weapons, bulk agents and associated equipment located at fixed ground targets with minimal collateral casualties (minimal agent dispersal)". {AD 6 Aug; ITAF 28 Aug}

6 August In Geneva, at the weekly plenary session of the CD, further expressions [see 30 Jul] of acceptance of the current draft CWC are made by the delegations of Chile, Canada, Romania, the UK, Finland, Japan, Australia and, provisionally, Ukraine, generally with complaints about one or another aspect of the draft {CD/PV.629}. The UK statement, by Ambassador Michael Weston, observes that the draft is "very far from the sort of dish which would have been produced had it been pre-cooked, as some have suggested, by a German chef with various Western helpers in an Italian kitchen" [see 4-7 May]. The Australian statement, by Ambassador Paul O'Sullivan, quotes a recent letter from Foreign Minister Gareth Evans [see 19 Mar] to his counterparts in other countries: "We all know that if we are to achieve a convention that is capable of offering to all States a more secure environment and to provide to all States a more confident environment for trade in chemicals, all of us will have to compromise on our national preferences. We believe, as do many others, that the text in WP.400/Rev.1 does that in an equitable and fair manner."

6 August The Australia Group makes a formal statement at today's plenary session of the CD. In the statement, the 22 member states "undertake to be original signatories" of the CWC and "fully to comply" with Article XI which, they say, "aims at facilitating the fullest possible exchanges in the field of chemical activities for purposes not prohibited under the Convention so as to promote the harmonious economic or technological development of all States parties". Further: "They undertake to review, in the light of the implementation of the Convention, the measures that they take to prevent the spread of chemical substances and equipment for purposes contrary to the objectives of the Convention, with the aim of removing such measures for the benefit of States parties to the Convention acting in full compliance with their

obligations under the Convention. They intend thus to contribute actively to an increase in commercial and technological exchanges between States and to the universal and full implementation of the Convention on the prohibition of chemical weapons." {CD/1164}

6 August Indian CD Ambassador Prakash Shah responds at the CD to the Australia-Group statement in the following terms: "While this statement of intention is indicative of the recognition of our concerns [see 31 Jul] and goes some way towards addressing our apprehensions regarding the Australia Group, it is the belief of my delegation that the intent behind this statement should be reflected adequately in article XI of the Convention, as and when the present negotiations on WP.400/Rev.1 conclude." {CD/PV.629}

6 August The US House of Representatives adopts its version of the Russian-aid bill, HR 5750, the *Freedom for Russia and Emerging Eurasian Democracies and Open Markets Support Act* {CR 6 Aug}. The legislation would provide \$400 million for disarming the former Soviet Union, including support for the Russian chemdemil program. One of the preconditions for aid is that recipient states are "adhering to arms control obligations derived from agreements signed by the former Soviet Union.

A similar bill had been adopted by the Senate during July. The two bills now proceed to conference for reconciliation.

7 August In Baghdad, a 22-person UNSCOM team led by Nikita Smidovich of Russia arrives {IHT 8-9 Aug} to conduct inspections at locations where, as UNSCOM chairman Rolf Ekéus had put it three days previously, "we have reason to suspect that prohibited material is stored or hidden" {FT 5 Aug}. The primary mission of the team, UNSCOM 42, is to conduct the thirteenth ballistic-missile inspection {personal communication}. The day before the team's arrival, the Iraqi government had announced that it would not allow UN inspectors to enter any ministry building, whereupon President Bush, on his election-campaign trail, said that the United States would help guarantee the right of the UN to enter any building it might wish to inspect {IHT 7 Aug}.

7 August In Geneva, for today's crucial meeting [see 31 May] of the CD Ad Hoc Committee on Chemical Weapons, its

chairman has distributed a paper setting out amendments to his earlier draft CWC {CD/CW/WP.427}. His changes partly reflect the proposals by the Group of 14 [see 24 Jul], Russia, Cuba and Peru [see 27 Jul]. He has grouped them into six clusters: (1) herbicides and riot control agents; (2) destruction matters; (3) Executive Council -- composition; (4) designation of inspectors and inspection assistants; (5) assistance and protection; and (6) economic and technological development, and transfers of scheduled chemicals.

The committee, it seems, indicates a sufficient degree of acceptance of these revisions for an unidentified US negotiator to tell a reporter "This is the end of the substantive talks; now it's a question of procedure", and for the chairman's draft to be reported in the Western press as an agreed one, albeit alongside a report that some Third World countries remained unhappy with it {IHT 8-9 Aug}. In fact, a number of delegations had expressed reservations to the amendments proposed in the Chairman's paper, including the Russian delegation, so that a complete and unambiguous consensus has not yet been achieved {CD/PV.631}.

Also distributed by the Chairman is a report from the Editing and Drafting Group [see 23 Jan] setting out agreed textual revisions.

9 August The German Foreign Ministry announces that authorities in Cyprus had recently stopped a German freighter en route to Syria, ordering it to return its cargo to India; the cargo included 25 containers of the nerve-gas precursor trimethyl phosphite, for which the German shippers had not obtained an export license {DPA 9 Aug in FBIS-WEU 10 Aug; IHT & FR 10 Aug; DPA 8 Aug in JPRS-TND 20 Aug}. The private Bombay company which had manufactured the chemical, United Phosphorus Ltd, later says it had made the export to Syria "only after due verification and there is no possibility of misuse of the material". An earlier consignment of 45 tons, the first half of a \$200,000 order placed by Setma Ltd of Damascus with an end-use certificate from the Syrian Chamber of Commerce, had reached Damascus on 30 May. The trimethyl phosphite was ostensibly for production of the pesticide DDVP {JT 16 Aug; AP as in CN 17 Aug; *Jerusalem Post* 22 Aug; *Economist Foreign Report* 10 Sep}.

9 August In Iraq, biological-weapons studies had been under way since 1983, according to the London *Observer*, which

GLOSSARY OF ABBREVIATIONS FOR NEWS CHRONOLOGY

ACR	<i>Arms Control Reporter</i>	DN	<i>Defense News</i>	JT	<i>Jordan Times</i>
AD	<i>Aerospace Daily</i>	DTel	<i>Daily Telegraph</i> (London)	KZ	<i>Krasnaya Zvezda</i>
AN-NA	<i>Atlantic News</i>	DW	<i>Defense Week</i>	NG	<i>Nezavisimaya Gazeta</i>
BS	<i>Baltimore Sun</i>	DT	<i>Disarmament Times</i>	NJ	<i>National Journal</i>
BBC-SWB	BBC-Summary of World Broadcasts	FAZ	<i>Frankfurter Allgemeine Zeitung</i>	NYT	<i>New York Times</i>
CBW	Chemical/biological warfare	FBIS	Foreign Broadcast Information Service (Washington)	Obs	<i>Observer</i> (London)
CD	Conference on Disarmament	FR	<i>Frankfurter Rundschau</i>	RG	<i>Rossiyskaya Gazeta</i>
CD/	CD document	FT	<i>Financial Times</i> (London)	S/	UN Security Council document
C&EN	<i>Chemical & Engineering News</i>	Guar	<i>Guardian</i> (London)	ST	<i>Sunday Times</i> (London)
CN	<i>Current News Early Bird</i>	IHT	<i>International Herald Tribune</i>	STel	<i>Sunday Telegraph</i> (London)
CQ	<i>Congressional Quarterly</i> (Weekly Report)	Ind	<i>Independent</i> (London)	SZ	<i>Suddeutsche Zeitung</i>
CR	<i>Congressional Record</i>	ITAF	<i>Inside the Air Force</i>	TL	<i>Times</i> (London)
CW	Chemical warfare	Izv	<i>Izvestiya</i>	Tag	<i>Tageszeitung</i> (West Berlin)
DD	<i>Defense Daily</i>	JDW	<i>Jane's Defence Weekly</i>	WP	<i>Washington Post</i>
		JPRS	Joint Publications Research Service (Washington)	WT	<i>Washington Times</i>
				WSJ	<i>Wall Street Journal</i>

attributes the information to an Iraqi scientist now living in Iran. The *Observer* story continues: "Iraq's biological warfare research was carried out under the auspices of the Al Hasan al Haitham Foundation in Baghdad, under the supervision of Saddam's intelligence services. The first director of the weapons project was a professor from the Veterinary College, who was later arrested for not meeting Saddam's deadline." {Obs 9 Aug}

10 August In Suva, the South Pacific Forum secretariat releases a report on the US chemdemil facility on Johnston Atoll [see 31 Mar] that had been prepared by a Forum scientific mission which had visited the place last November. The team comprised two scientists from Australia and one each from New Zealand and Papua New Guinea. The report says that there is no significant regional environmental threat from JACADS, but sea air might have some effect on the facility later. Operations at JACADS are scheduled to finish in 1995, at which time, the report observes, the installation would represent a "functioning proven destruction facility". The report says: "There will be a degree of pressure, founded on some logic, to continue the use of Johnston Island facility to carry out further chemical weapons destruction programs". It sees no technical reasons why work should not continue beyond 1995, but recommends a further Forum inspection before that happens. {AFP 10 Aug in FBIS-EAS 10 Aug}

10 August Bosnian Territorial Defense Forces are reported by the Croatian High Command as having just fulfilled their ultimatum that Serbian forces in Banja Luka should withdraw their rockets from that area or else face the destruction of the ammonia plant in Bosanska Gradiska. {Croatian Radio 10 Aug in BBC-SWB 11 Aug}

10 August In Geneva, addressing a press conference, the Chairman of the CD Ad Hoc Committee on Chemical Weapons says that the CW negotiations have now ended and that, in regard to the new treaty text, "we are quite confident we will have universal adherence, minus a very few". {Reuter in CN 12 Aug}

11 August In Kiev, a Ukrainian Foreign Ministry spokesman tells reporters that there are no stockpiles of chemical weapons on Ukrainian territory at present. The spokesman also says that the republic has some 200 civilian chemical plants whose production would require monitoring under the imminent Chemical Weapons Convention {InterFax 11 Aug in JPRS-TAC 11 Sep}. The Foreign Ministry had announced at a press conference the day previously that Ukraine would be one of the first states to sign the Convention [see also 6 Aug] {InterFax 10 Aug in JPRS-TAC 11 Sep}.

12 August From Beijing, the Japanese news agency Kyodo reports an historical study, *Chemical War History*, published in June 1991 by the Engineering Academy of the Chinese Army Chemical Defense Command. The 581-page study had addressed the use of chemical weapons from World War I to the 1980s Gulf War, more than half of the study being concerned with the 1937-45 Sino-Japanese War. Using new archive and other information, it had documented at least 1668 occasions on which forces of the Imperial Japanese Army had used chemical weapons in China, causing more than 47,000 casualties with 6000 dead. {Interfax 12 Aug in FBIS-CHI 13 Aug}

13-16 August In Beijing, government officials meet with

visiting US Arms Control & Disarmament Agency Director Ronald Lehman for talks on a range of arms-control topics, including chemical weapons. The officials, including Foreign Minister Qian Quichen, reportedly complain that the projected CWC inspection regime would place an undue burden on Chinese chemical industry as the country struggles to modernize. {DN 24 Aug}

13 August Austria introduces into the CD plenary two technical studies on the question of 'capable' facilities. {CD/PV.631}

13 August The United Kingdom transmits to the CD a paper addressing the requirements for safety during on-site inspections under the CWC, a topic thought relevant to the future work of the Preparatory Commission for the Organization for the Prohibition of Chemical Weapons. {CD/1168}

13 August President Bush announces strong US support for the draft of the CWC and reaffirms US commitment to becoming an "original party". {US Department of State Dispatch}

17 August In St Petersburg, the *Okeanotekhnika* association of enterprises and research organizations announces that the expedition to investigate the chemical-weapons ocean-burial sites in the Baltic [see 22 Jul] has been postponed. An international conference on the matter is expected to be convened in September {ITAR-TASS 17 Aug in JPRS-TAC 11 Sep}. *Okeanotekhnika* has forecast that the casings of the dumped munitions will disintegrate by 1995 [see also 11 Jul] {Severo-Zapad, August}.

17 August The US Defense Department is evaluating possible contributions it might make to counterproliferation efforts, whether in the nuclear, missile or CBW fields, according to a senior Pentagon official in an interview which *Defense Week* publishes today. The official, James Locher, Assistant Defense Secretary for special operations and low intensity conflict, had said: "There may be some options that special operations forces can provide to the national, command authority as they look at various strategies." He had had in mind "direct action or special reconnaissance kinds of activities". {DW 17 Aug}

18 August In Iraq, the UNSCOM team led by Nikita Smidovich of Russia [see 7 Aug] completes its inspection without incident. An UNSCOM official in New York says the team, which had visited several sites, had "found significant additional information concerning the ballistic missiles program" {IHT 18 Aug}. The team leader speaks of having been given some information about Iraq's chemical, nuclear and biological weapons manufacturing {WP 19 Aug}.

19 August In New Delhi, three days of ministerial-level talks between India and Pakistan come to an end. The foreign secretaries of the two countries sign two agreements, one of them a *Joint Declaration on the Complete Prohibition of Chemical Weapons* [see also 28 Nov 91] {All-India Radio 19 Aug in BBC-SWB 20 Aug; IHT 20 Aug}. The two sides had also agreed to consider issuing a joint declaration on biological weapons {Press Trust 19 Jul in BBC-SWB 20 Jul}. Under the chemical agreement, the two sides declare that:

- "1. They undertake never under any circumstances:
 - "a) to develop, produce or otherwise acquire chemical weapons;
 - "b) to use chemical weapons;

"c) to assist, encourage or induce, in any way, anyone to engage in development, production, acquisition, stockpiling or use of chemical weapons.

"2. They would cooperate with each other, in finalization and adoption of a comprehensive Chemical Weapons Convention which ensures the security of all States and encourages the full utilization of achievements in the field of chemistry for peaceful purposes, especially of economic development of developing countries.

"3. They reiterate their resolve to become original States party to the proposed Convention currently being drafted in the Conference on Disarmament.

"4. They would exercise their right to develop their chemical industry and related applications and products only for peaceful purposes and for the welfare of their peoples."

In the preambular part of the *Joint Declaration* the two sides also reaffirm "their respective unilateral declarations on non-possession of chemical weapons". {US Department of State text}

The CD in Geneva is informed next day about this bilateral agreement. {CD/PV.633}

19 August In Geneva, the CD Ad Hoc Committee on Chemical Weapons meets to consider an early draft of its report to the CD, principally the question of how it should present the revised version of the chairman's draft CWC [see 7 Aug] {CD/CW/WP.400/Rev.2}, now available as clean text, albeit only in English. Ambassador von Wagner urges that his draft CWC be looked at as a whole in order for its overall balance of rights and obligations, of benefits and costs, to be properly evaluated {CD/1170}.

19 August Iraq did not produce a practical delivery system for biological weapons, says former UNSCOM chief inspector Major Karen Jansen [see 5 Jul] of the US Army Chemical Corps at a news briefing convened in Washington under non-governmental auspices. The Iraqi BW program did not appear to have come close to weaponizing pathogens. {WT 20 Aug; DW 24 Aug} [See also 17 Nov 91 and 9 Aug]

21 August The Defense Department has now initiated the formal process whereby a US contractor will be selected for the \$25 million aid package that the United States has thus far agreed for Russian chemdemil [see 30 Jul]: *Commerce Business Daily* today publishes a request for proposals from interested US companies. {DN 31 Aug}

A target of October for selecting the contractor had been mentioned during an interview three weeks previously in Washington by the head of the Russian program, General Kuntsevich, who is required to submit his overall chemdemil plan to the Russian Supreme Soviet by 15 September [see 8 Jul]. He had said, too, that under his plan three chemdemil facilities will be built near CW production and storage sites in central Russia {DN 10 Aug}. He is deliberately withholding the names of the locations under consideration for fear of exciting local opposition before the compensation packages [see 12 Jun] are more fully developed {ITP 6 Aug}.

Several US companies are reportedly interested. One consortium is said to involve the Battelle Memorial Institute, Bechtel and Westinghouse Electric. Another includes Lockheed, Babcock & Wilcox, Olin and Burns & Roe [see also 30 Jan]. But there is scepticism, for economic rather than technical reasons, about the Russian concept of recycling the CW agents into worthwhile products [see 12 Jun]. {WSJ 2 Sep}

21 August In Geneva, the CD Ad Hoc Committee on Chemi-

cal Weapons continues its consideration of the new draft CWC in the context of the draft of its report to the Conference [see 19 Aug]. Several delegations present critical comments, both on the draft and on the process by which it was reached, some insisting that their comments appear in the report. {CD/1170}

23 August From Abkhazia, there are reports that the Georgian National Guard is using chemical weapons in fighting around Sukhumi {ITAR-TASS 23 Aug in BBC-SWB 24 Aug}. The commandant of Sukhumi denies the reports, characterizing them as disinformation by the press service of the Abkhazian Supreme Soviet {ITAR-TASS 23 Aug in BBC-SWB 25 Aug}.

24 August In the CD Ad Hoc Committee on Chemical Weapons, the Russian delegation states that the draft CWC contains two features "unacceptable in principle, which make it impossible for the Government of the Russian Federation to agree to the text of the draft". One has to do with the apportionment of destruction-verification costs; the other, with the question of converting rather than destroying former chemical weapons production facilities. {CD/1170}

Academician Anatoliy Kuntsevich, chairman of the Russian presidential Committee on CBW Convention Problems, explains these difficulties soon afterwards to an *Izvestiya* correspondent, saying, however: "Russia will undoubtedly sign the Convention; it cannot do otherwise. At every stage of its elaboration and coordination...we have stated, and continue to state, that we are prepared to be an original and definite party to it."

Concerning the conversion issue, he speaks of chemical-weapons production facilities located at Berezniki, Chapayevsk, Dzerzhinsk, Novocheboksarsk and Volgograd, observing that "there was not the tiniest accident or incident at any of these places" during past production operations. {Izv 28 Aug in FBIS-SOV 3 Sep}

24 August Norway transmits to the CD a technical paper on the air-transportation of CWC verification samples, another contribution from its long-running research effort in this area [see 11 Jun]. {CD/1169}

25 August In Bosnia-Herzegovina, Serbian aircraft are said by Croatian Radio to have discharged poisonous gases over Mount Igman near Sarajevo {Croatian Radio 25 Aug in BBC-SWB 27 Aug}. There have been several such reports from the region in recent weeks, none of them independently verified.

26 August In Jerusalem, Israeli government officials announce that all gas masks distributed during the Kuwait War are to be replaced in a \$200 million operation beginning in October {DTel 27 Aug}. Next day, however, journalists are told that the equipment plan will not go ahead {DPA in CN 28 Aug}.

26 August In Geneva, the CD Ad Hoc Committee on Chemical Weapons formally adopts its report to the full conference, to which is appended its negotiated text for the projected CWC, now no longer merely a Chairman's draft {FT 28 Aug; DN 31 Aug}.

A new draft of the report had been submitted by the Chairman two days previously and had contained several statements by delegations critical of the text [see 19 Aug] or entering "national understandings" {CD/CW/WP.436}. Prior

to adoption of the draft report, several more national statements had been inserted, including a statement by the UK that it "did not accept that such statements had any authoritative status at the level of interpretation or otherwise" (a position the report says is shared by Argentina, Australia, Belgium, Brazil, Canada, France, Hungary, Nigeria, Peru, Sweden and Venezuela). Also inserted was a long statement by the delegation of France that laid stress on the benefits of the treaty, a statement with which some 20 other delegations asked for their concurrence to be recorded. Inserted, too, were some paragraphs by the Chairman setting out his understanding of certain contentious provisions {CD/1170}.

With adoption of the report, the Ad Hoc Committee concludes its formal business. An informal meeting is scheduled for 2 September for an exchange of views on the projected CWC Preparatory Commission. {CD/PV.634}

28 August From Sarajevo, Bosnian authorities state that chemical agents had just been fired at the slopes of Trebevic by "the aggressor's artillery" [See also 25 Aug]. {Radio Bosnia-Herzegovina 28 Aug in FBIS-EEU 31 Aug}

31 August The US government wants Russia to "take concrete steps to demonstrate that the former Soviet offensive BW program has been terminated" says State Department spokesman Richard Boucher. He continues: "Russian acknowledgement of the full size, scope and maturity of the former Soviet Union's program in its declaration to the UN [under the expanded BWC confidence building measures] would contribute to this objective." {NYT 1 Sep}

Spokesman Boucher is reacting to a long article in today's *Washington Post* about how and why the US and British governments are worried that the Russian government may not have fulfilled its promise earlier in the year [see 1 Feb] to shut down any illicit Soviet BW programs that may have survived. These worries, says the *Post*, had been stimulated by Russia's failure to make what could be considered a sufficient declaration to the UN [see 17 Jun, Yeltsin], a failure which has excited suspicion that the "highly secret former Soviet program is not yet fully under Yeltsin's control and that elements of it have been hidden by military officials who want to keep parts of the program intact". The *Post* reports that Acting Secretary of State Lawrence Eagleburger had, during the previous week, complained about Moscow's foot-dragging when he met with Russian Foreign Minister Andrei Kozyrev in London. A redraft of the Russian declaration to the UN had been seen in July by British and US officials; their principal criticism of the earlier versions was that they did not give, according to the *Post*, "an adequate account of the Soviet Union's longstanding use of an ostensibly civilian pharmaceutical and medical complex known as Biopreparat as a cover for illicit military work". The *Post* article includes, without attribution, new information about Biopreparat and the defector from whom it is said to have originated [see 4 Jul]. {WP 31 Aug}

The British Embassy in Washington confirms that the British government had been concerned about Russia's failure to make the declaration to the UN {DT & TL 1 Sep}.

The Russian Defense Ministry Directorate for Bacteriological, Radiation and Chemical Defense denies that there is still an active germ-weapons program, saying, as reported by *Izvestiya*, "It is all utter lies". A detailed report on the BW programs had in fact been submitted to the United Nations, described by *Izvestiya* in the following terms: "The document cites the specific formulas that we have in Russia and

lists all the tests carried out with artillery shells, aerial bombs and missiles. The test site on the island of Vozrozhdeniye in the Aral Sea, which has been closed for several years now, and the Defense Ministry's scientific research institutes in the cities of Kirov (microbiology), Segiyev Posad (virology) and Yekaterinburg (military technical problems of antibacteriological protection) are cited. Information about the 'Biopreparat' concern, which was part of the now-closed Administration of the Microbiological Industry, whose scientific research institutes did indeed work on problems of military-related biology, was communicated in documents that were presented to the United Nations and also to the US Administration on a confidential basis. The information presented there is exhaustive, Russian experts maintain."

Izvestiya goes on to report that the United States has not responded to proposals "that mutual verification be carried out at all facilities that the sides might deem necessary". It suggests that the apparently prevailing desire for secrecy is due to commercial interests vested in "new science-intensive and highly efficient techniques in bioengineering, genetics, biophysics and other neighboring scientific disciplines." {Izv 1 Sep in FBIS-SOV 1 Sep}

A Russian Foreign Ministry statement next day confirms that a declaration including information about past Soviet BW programs had been made to the United Nations in July, saying that it had mentioned "incidents of violation of some provisions" of the Biological Weapons Convention. The statement also says that "Russia has twice proposed to the United States to set up a joint commission of experts which would check the information available at both sides on bacteriological weapons research", an initiative to which Washington has not responded. {ITAR-TASS 2 Sep in FBIS-SOV 3 Sep}

It is subsequently reported, with attribution to an unidentified American official, that the Russian declaration to the United Nations had "gone through the wrong chain", meaning that the branch of the UN Secretariat to which outside inquiries about the declaration were directed had for a long while been unaware of its existence {ACR, No. 10-92, p. 701.B-100}. Hence, apparently, the report in the *Washington Post* article that the director of the UN Office of Disarmament Affairs, Dr Prvoslav Davinić, had said during the previous week that the Russian declaration had not been received.

31 August The United Nations Office of Disarmament Affairs has by now received declarations of information and data from 33 of the 120-plus States parties to the Biological Weapons Convention in accordance with the extended confidence-building measures agreed at the Third Review Conference [see 27 Sep 91]. The declaring countries (and the dates of declaration) are as follows: Argentina (27 Aug), Australia (15 Apr), Austria (14 Apr), Belarus (14 May), Belgium (8 Jul), Bulgaria (26 May), Canada (14 Apr), China (1 Aug), Cyprus (28 Apr), Czechoslovakia (7 Apr), Denmark (30 Jun), Finland (1 Jun), France (15 Jun), Germany (8 Apr), Hungary (30 Apr), Japan (28 Apr), Jordan (14 Aug), Malta (30 Apr), Mongolia (15 Apr), Netherlands (22 May), New Zealand (15 Apr), Norway (21 Apr), Russia (3 Jul), South Korea (1 May), Spain (30 Aug), Sweden (9 Apr), Switzerland (23 Apr), Thailand (20 Aug), Tunisia (7 May), Ukraine (15 Jun), United Kingdom (14 Apr), United States (15 Apr) and Yugoslavia (8 Apr).

The CBM-F declarations by Canada, France, Russia, the UK and the USA included information on past offensive BW programs.

1 September In northern Bosnia-Herzegovina, Croatian forc-

es use poison gas for the third time in the past two months, according to a statement issued next day by the Serbian Krajina Corps Information Office [See also 28 Aug]. {Tanjung 2 Sep in FBIS-EEU 3 Sep}

1-6 September In Jakarta, Indonesia, the Non-Aligned Countries hold their tenth summit conference. The Final Document states that the assembled heads of state or government "welcomed the Global Convention on the Prohibition of Development, Production, Stockpiling and Use of Chemical Weapons and called for its speedy entry into force as a meaningful step forward towards the elimination of all weapons of mass destruction in all regions and towards the shared objective of general and complete disarmament. They called upon all developed countries to adopt measures promoting universal adherence to the Chemical Weapons Convention, through transfer of technology, materials and equipment for peaceful purposes in the chemical field and removing all existing unilateral discriminatory and ad hoc restrictions which ran counter to this undertaking." {NAC 10/Doc.1-/Rev.1}

3 September In Geneva, during a meeting which lasts into the night, the Conference on Disarmament finally achieves agreement to include in its end-of-session report to the UN General Assembly the text for the projected CWC which its Ad Hoc Committee on Chemical Weapons had "agreed to transmit to the Conference on Disarmament for its consideration" [see 26 Aug] {FT, IHT & WP 4 Sep; AN-NA 9 Sep}. In a formula which makes no recommendation, the Conference registers its agreement in the following terms: "It was agreed by consensus that the draft Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction, adopted by the Conference on Disarmament, be transmitted to the forty-seventh session of the United Nations General Assembly" {CD/1173}.

A group of 34 states had declared beforehand that, at the imminent review conference of the Environmental Modification Convention, it would promote the understanding that the use of herbicides as a method of warfare in such a way as to cause widespread, long-lasting or severe effects was indeed prohibited by the EnMod Convention, as had been asserted in an uncontested interpretive statement [by the United States] during its negotiation. {CD/PV.635}

Iran, expressing concern about the provisions of the text for the Executive Council, had been the last to join the consensus, doing so after the Asian-group ambassadors had initiated agreement on the subregional group structure that would determine Asian representation on the Executive Council {DT 8 Oct}. France confirms its invitation to host a signature conference in Paris "at the beginning of 1993" {CD/PV.635}.

4 September Archives of the Communist Party of the Soviet Union reveal, according to the *Washington Times*, "the fact that an outbreak of pulmonary anthrax, which killed 70 people in the Russian city of Sverdlovsk in 1979 [see 17 Jun, Yeltsin], was caused by a biological weapons accident" {WT 4 Sep}. The newspaper provides no documentation or other substantiation of its claim.

4 September The US Army Training and Doctrine Command issues a draft *Operations Concept for Disabling Measures* intended to provide, when finalized, a formal US military framework for assessing such measures as an alternative to

the use of deadly force {DN 19 Oct}. It may thus prove to be the first step towards actual acquisition of the novel non-lethal weapons technologies that have been attracting renewed attention [see 17 Feb].

6 September A German-Russian joint venture to destroy chemical weapons is envisaged in a cooperation agreement just concluded between Russia and the German firm Lurgi AG {DPA 6 Sep in JPRS-TND 9 Sep}. Earlier, a Russian delegation had visited Munster, where Lurgi had been contracted for the Federal German chemdemil facility. {*Trust and Verify*, September} Reportedly, the partners are planning to construct a large-scale thermal-technology facility in the Udmurt Republic for detoxification of lewisite.

The overall Russian chemdemil program currently envisages the construction of six or seven [but see 21 Aug] chemdemil facilities for dealing with the CW weapons of the former Soviet Union, which reportedly amount to some 42,000 agent tonnes [see also 2 Aug 90 and 8 Apr] {AN-NA 11 Sep}.

7 September In Yerevan, Armenia, authorities confiscate 13 kilograms of cocaine, syringes and "bottles of nerve gas" from a passenger arriving at Zvartnots airport from Vilnius via Groznyy. {Interfax 8 Sep in FBIS-SOV 11 Sep}

9-14 September In Biesenthal, Germany, a workshop on the proposed 'Vaccines for Peace' program {*Politics and the Life Sciences* August} is cosponsored by the Max Delbrück Center for Molecular Medicine and the Stockholm International Peace Research Institute. The participants agree that the program should be established and that a steering committee to that end should be formed under the chairmanship of Jack Melling of CAMR Porton Down with Erhard Geissler of the Max Delbrück Center and Jack Woodall of WHO as vice chairmen. {*Biesenthal Consensus (Vaccines for Peace)* 13 Sep}

9 September In Washington, a public meeting convened by a panel of the Institute of Medicine initiates its review, commissioned by the Department of Veterans Affairs, of all studies of the health effects of Agent Orange and related products. {*Science* 4 Sep}

10-11 September In Moscow, talks between teams of senior Russian, British and US officials about compliance with the Biological Weapons Convention [see 31 Aug] culminate in adoption of a *Joint Statement on Biological Weapons by the Governments of the United Kingdom, the United States and the Russian Federation*. This states that the "three governments confirmed their commitment to full compliance with the Biological Weapons Convention and stated their agreement that biological weapons have no place in their armed forces". The statement continues as follows:

"3. During these meetings, the Russian Government stated that it had taken the following steps to resolve compliance concerns:

"(A) Noted that President Yeltsin had issued on 11 April 1992 a decree on securing the fulfilment of international obligations in the area of biological weapons. This affirms the legal succession of the Russian Federation to the obligations of the Convention and states that the development and carrying out of biological programs in violation of the Convention is illegal. Pursuant to that decree, the Presidential Committee on convention related problems of chemical weapons and biological weapons was entrusted with the oversight of the implementation of the 1972 Convention in the Russian Federation:

"(B) Confirmed the termination of offensive research, the dismantlement of experimental technological lines for the production of biological agents, and the closure of the biological weapons testing facility:

"(C) Cut the number of personnel involved in military biological programs by 50%:

"(D) Reduced military biological research funding by 30%:

"(E) Dissolved the department in the Ministry of Defense responsible for the offensive biological program and created a new department for radiological, biological and chemical defense:

"(F) Submitted the declaration to the United Nations under the terms of the confidence-building measures agreed at the Third Review Conference of the Convention in 1991:

"(G) President Yeltsin has ordered the conduct of an investigation into activities at the Institute of Ultrapure Biological Preparations at St Petersburg, in response to concerns raised by the UK and the US. UK, US and other experts are invited to take part in this investigation, including a prompt visit to this facility, and the report will be made public:

"(H) The Russian Parliament has recommended to the President of the Russian Federation that he propose legislation to enforce Russia's obligations under the 1972 Convention."

"4. As a result of these exchanges, Russia has agreed to the following steps:

"(A) Visits to any non-military biological site at any time in order to remove ambiguities, subject to the need to respect proprietary information on the basis of agreed principles. Such visits would include unrestricted access, sampling, interviews with personnel, and audio and video taping. After initial visits to Russian facilities there will be comparable visits to such UK and US facilities on the same basis:

"(B) The provision, on request, of information about dismantlement accomplished to date:

"(C) The provision of further clarification of information provided for [sic] in form F of its UN Declaration:

"(D) Prominent independent scientists will be invited to participate in the investigation of cases concerning compliance with the Biological Weapons Convention."

"5. In addition, the three Governments agreed to create working groups, including experts, to address the following:

"(A) Visits to any military biological facility, on a reciprocal basis, in order to remove ambiguities, subject to the need to respect confidential information on the basis of agreed principles. Such visits would include unrestricted access, sampling, interviews with personnel, and audio and video taping:

"(B) A review of potential measures to monitor compliance with the Biological Weapons Convention and to enhance confidence in that compliance:

"(C) A review of potential modalities for testing such measures:

"(D) An examination of the physical infrastructure of biological facilities in the three countries to determine jointly whether there is specific equipment or excess capacity inconsistent with their stated purpose:

"(E) Consideration of cooperation in developing biological weapons defense:

"(F) Examination of ways to promote cooperation and investment in the conversion of biological weapons facilities, including visits to already converted facilities:

"(G) Consideration of an exchange of information on a confidential, reciprocal basis concerning past offensive programs not recorded in detail in the declarations to the UN:

"(H) The provision of periodic reports to their legislatures and publics describing biological research and development activities:

"(I) The encouragement of exchanges of scientists at biological facilities on a long term basis."

Speaking at an end-of-talks news conference, Russian Deputy Foreign Minister Grigori Berdennikov (who had headed the Russian team) says that the *Joint Statement* represents "the first time we have managed to agree on a high-level mechanism to control the international treaty on biological weapons" (IHT 15 Sep). At a later news briefing he tells reporters that "activities banned by the [BWC] were in progress from 1946 until March 1992", and Major-General Valentin Yevstigneyev (Deputy Chief of the Defense Ministry Radiation, Biological and Chemical Directorate) [see 17 Apr] voices hope that a more precise agreement will be reached on what the Biological Weapons Convention prohibits or permits at biological facilities, and that the treaty itself will be improved (ITAR-TASS 14 Sep in FBIS-SOV 16 Sep; Ind & NYT 15 Sep).

General Yevstigneyev also tells reporters that the 50 percent personnel cuts and the 30 percent funding cuts referred to in paras 3(C) and 3(D) of the *Joint Statement* had resulted from the closing of the Vozrozhdeniye Island facility "and four departments in the Russian Armed Forces' Central Institute of Microbiology directly linked to it". Reporters are also told that it has been five years since any orders were placed with the St Petersburg facility referred to in para 3(G), and that, in any case, Western intelligence services had mistaken work on hen-cholera vaccine there for BW-related work on plague bacteria. (NG 15 Sep in FBIS-SOV 16 Sep; KZ 16 Sep in FBIS-SOV 16 Sep)

General Yevstigneyev subsequently amplifies some of his comments for the military newspaper *Krasnaya Zvezda*, which reports that, during 1991, prior to the 30 percent cut, military biological research had consumed R70 million, employing some 400 scientists. The reporter states that the corresponding figures for the United States during 1991 were \$100 million and more than 600 scientists, and he makes this comment: "But were all the suspicions about us really groundless? I continued trying to ascertain. Alas, not all. In the mid-seventies, on the orders of the top leadership, well protected premises were constructed at certain pharmaceutical enterprises. There was no doubt about their purpose. Thanks to space reconnaissance, their existence at once became an open secret. These are real facts. But, nonetheless, what is called forbidden activity was to a considerable extent connected precisely with the military-technical appraisal of work performed abroad in connection with the possibility of producing bacteriological weapons there." He goes on to address the question of verifying compliance with the Biological Weapons Convention, noting how the trilateral statement has at last opened up the issue, and describing Russian proposals for "objective checks". (KZ 29 Sep in FBIS-SOV 6 Oct)

11-17 September In Berlin, the 42nd Pugwash Conference on Science and World Affairs, *Shaping our Common Future: Dangers and Opportunities*, is attended by some 350 people. One of its ten working groups addresses the issue of CBW-weapons proliferation.

12 September In Iraq, a special UNSCOM team of three chemical experts completes a week-long visit for the commissioning of the chemdemil plants at Muthanna [see 5 Apr]. Team leader Ron Manley of the UK tells reporters that the nerve-gas hydrolysis plant is expected to become operational

within a couple of weeks or so; the mustard-gas incineration plant, within a couple of months. He says that there are about 140 tonnes of nerve gas and 400 tonnes of mustard gas in bulk storage waiting to be processed, including agent drained from munitions, and that operations are expected to last 6-12 months. {AFP 12 Sep in FBIS-NES 14 Sep; AP in *Boston Globe* 13 Sep}

Already in progress at Muthanna, under the supervision of resident team UNSCOM 38, the Chemical Disarmament Group led by Garth Whitty of the UK [see 23 Jun], is fireball-destruction [see 24 Mar] of nerve-gas rockets at a rate of about 40 per day. {*Boston Globe* 10 Sep}

12 September The League of Arab States meets in ministerial session, its agenda including the CWC {KUNA 10 Sep BBC-SWB 12 Sep}. Speaking later to the UN General Assembly, Egyptian Foreign Minister Amre Moussa says: "The meeting approved the following points as a basis for the Arab position towards the Convention on the prohibition of chemical weapons: full willingness to deal with all disarmament proposals that would provide security through equal obligations applicable by one standard to all the States of the region; reaffirmation of full support for the elimination of all weapons of mass destruction from the Middle East, including nuclear, chemical and biological weapons, as the best way to achieve security for all States of the region; and willingness to deal with the Convention on the prohibition of chemical weapons and [sic] the framework of efforts aiming at the establishment of the zone to the extent that...Israel would respond to international calls to accede to the Treaty on the Non-Proliferation of Nuclear Weapons and to subject its nuclear facilities to international safeguards system." {A/47/PV.12}

13 September In Bosnia-Herzegovina, Croatian forces are for the first time using "unidentified and presumably poisonous gas" at Trebinje, according to the information service of the Herzegovina Corps Command in Bileca [See also 1 Sep]. {*Tanjug* 13 Sep in FBIS-EEU 14 Sep}

14 September The Iraqi government has a storage site for chemical weapons, not yet inspected by UNSCOM, located in the forest between Raider and Daraman in the Jabal Hamrin region, according to the Patriotic Union of Kurdistan. {FR 14 Sep}

14 September The US Commerce Department Bureau of Export Administration publishes proposed revisions to the entry in its Commodity Control List dealing with dual-use biological equipment, ECCN 1B71E. The revisions would conform US export controls to the biological equipment control list which the Australia Group was considering for adoption at its June meeting [see 21 May and 2-4 Jun]. Comments on the proposed new rule are due by 14 October. {FR 14 Sep}

14-18 September The Second Review Conference of the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques convenes in Geneva. Its Final Declaration states that the military or any other hostile use of herbicides as an environmental modification technique is a method of warfare prohibited by Article I of the Convention, if such use upset the ecological balance of a region, causing widespread or long-lasting destruction, damage or injury to any other State party. {UN press release DC/2422, 24 Sep} [See also 3 Sep]

16 September In Azerbaijan, the Defense Ministry press

center announces that villages in the Tazuz region have been fired upon with poison-gas projectiles. It states that 122mm artillery rounds filled with needles and containing an orange substance had been used against the villages, and that several cases had been registered in which people had died a few minutes after a shell splinter reaching them. {InterFax 16 Sep in FBIS-SOV 17 Sep}

16 September In Russia, President Yeltsin issues a ukase *On Introduction of Control of Exports from the Russian Federation of Chemicals and Technologies which are of Worldwide Significance but Can be Used in the Creation of Chemical Weapons*. The ukase lists 40 chemicals or families of chemicals, including ones in the CWC control schedules but not on the Australia-Group list, and vice versa; the technologies to be controlled are identified solely by the chemicals they can be used to produce. The requisite governmental directive and statute are introduced over the next two weeks. {RG 30 Sep in JPRS-TND 9 Oct}

16 September A Russian chemist, Dr Vil Mirzayanov, is reported in the *Baltimore Sun* as saying that a binary nerve-gas ten times as potent as VX had been developed at the secret institute in Moscow where he had worked from 1965 until January 1992. He had made a similar disclosure a year previously, in the 10 October 1991 issue of the Moscow journal *Kuranty* {*Kuranty* 29 Oct in FBIS-SOV 30 Oct}. He now states, further, that the development program had earned three of its leaders---Institute-head Viktor Petronin, General Kuntsevich and General Yevstafiyev---secret Orders of Lenin in April 1991; and that, after initial field tests at Shikhany, full-scale testing in the Nukus region of Uzbekistan, south of the Aral Sea, had still been continuing in January 1992, the requisite quantities of binary components being produced at the Khimprom plant in Volgograd. He had declined, however, to disclose the chemical structure of the new poison.

The report is subsequently characterized to ITAR-TASS by an unidentified high-ranking official in the Russian Defense Ministry as an irresponsible fabrication. {Radio Rossii 18 Sep in FBIS-SOV 23 Sep}

Dr Mirzayanov and an associate publish an article with additional details in the 20 September issue of *Moskovskiy Novosti*. They identify the institute as 'GSNIIOKhT' (for State Union Scientific Research Institute of Organic Chemistry and Technology) and state that the field tests in Uzbekistan were conducted at a facility on the Ustyurt plateau near the city of Nukus. {*Moscow News*, No. 39; NG 23 Oct in FBIS-SOV 23 Oct; AN-NA 30 Oct}

19 September In Moscow, *Komsomolskaya Pravda* publishes particulars of Biopreparat [see 31 Aug], characterizing it as the 'Ogarkov system' (after its first chief, General V I Ogarkov) established in 1973 as an ostensibly civil front for an elaborate military biological weapons program. The article says that the beginning of the disintegration of the system in the late 1980s coincided with the defection to the West of V A Pasechnik, director of the Leningrad Institute of High Purity Preparations [see 10-11 Sep]. {*Komsomolskaya Pravda* 19 Sep in JPRS-TAC 8 Oct}

19 September In Bosnia-Herzegovina, in fighting around Vogosca, Muslim units are using "chemical agents and Dum-Dum ammunition" according to a Serbian news agency. {RTB Television (Belgrade) 19 Sep in JPRS-TND 22 Sep}

21 September In Iraq, an UNSCOM team arrives on an 8-day

mission, the ninth UN chemical inspection, to verify that stocks of chemical weapons have been moved from their previous sites to the central destruction facilities at al-Muthanna [see 12 Sep]. The 6-person team, UNSCOM 44, is led by Dr Bernhard Brunner of Switzerland. {AFP 21 Sep in FBIS-NES 22 Sep}

21 September President Bush says, during his address to the UN General Assembly in New York: "I want to announce my intention today to work with the United States Congress to redirect the United States Arms Control and Disarmament Agency...to refocus its talents on providing technical support for nonproliferation, weapons monitoring and destruction, and global defense conversion". {21 Sep in NYT 22 Sep}

22 September In Russia, an interview with the chairman of the presidential Committee on CBW Convention Problems, General Kuntsevich, is published by the Moscow journal *Rossiyskiye Vesti*. He had responded as follows to a question about Soviet noncompliance with the 1972 Biological Weapons Convention [see 10-11 Sep]: "Indeed, these clear violations...were only admitted after the totalitarian regime collapsed and duplicity in politics was abandoned. We admitted that after the Convention was ratified, the offensive programs in the area of biological warfare were not immediately curtailed, research in this area continued, and production went on. Methods of preparing biological agents for military purposes and methods of delivering them, using aircraft and missile munitions, were developed in one St Petersburg institute and at three military facilities in Kirov, Yekaterinburg and Sergiyev Posad. Tests were carried out on the island of Vozrozhdeniye in the Aral Sea... The first palpable move...toward the offensive programs finally being wound down was made in 1985 when it was proposed that the Soviet Union present a report to the United Nations on its compliance with the Convention. At this time research also began to be wound down, and the equipment for producing biological preparations began to be dismantled. But this winding down process went on for several years. The remnants of the offensive programs in the area of biological weapons were still around as recently as 1991. It was only in 1992 that Russia absolutely stopped this work."

He had spoken, too, about defectors from the program [see 31 Aug]: "Incidentally, they exaggerated our potential a lot in the area of biological weapons in order to bump up their price. For example, in 1989 a certain Pasechnik [see 19 Sep], who was director of a St Petersburg institute, fled to the West. He made up a lot in order to show how important he was. We are now suggesting to our Western colleagues that Pasechnik come with them to his old institute and show us what he made up. He did, of course, know a thing or two, but he invented a lot..."

To a question about the 1979 anthrax epidemic in Sverdlovsk (Yekaterinburg) [see 4 Sep], he had responded: "There was indeed a military facility in this city which among other things worked on methods of preparing anthrax. But the pattern of events that occurred at Sverdlovsk cannot be unequivocally linked to the scenario of a putative accident at the facility. It should have left characteristic traces and had fairly clearly defined near and distant infection zones. But nothing of the kind occurred. In the military facility's settlement, which in the case of an accident would inevitably have fallen within the near infection zone, there were no cases of illness. The experts advance various scenarios for what happened. Before coming to any unequivocal conclusion, they should all be studied exhaustively. Our committee plans to carry out

this work in the future." {*Rossiyskiye Vesti* 22 Sep in FBIS-SOV 24 Sep}

22 September Radio Bosnia-Herzegovina states that "the enemy is using chemical agents--irritants as well as napalm bombs" in the region of Gradacac [See also 13 Sep]. {Radio Bosnia-Herzegovina 22 Sep in FBIS-EEU 23 Sep}

22 September The United Nations Office of Disarmament Affairs issues the third addendum to its 1992 distribution of declarations received from States Parties to the Biological Weapons Convention in accordance with the extended confidence-building measures agreed at the Third Review Conference [see 31 Aug]. The new distribution comprises a declaration by Mexico dated 2 September, in addition to those of Argentina, Belgium, Jordan, Russia, Spain and Thailand {DDA/4-92/BW3/Add.3}. It does not include the declaration by Peru dated 21 September.

23 September The Indian Ministry of External Affairs announces that the company which had exported 45 tons of trimethyl phosphite to Syria in July, United Phosphorus [see 9 Aug], is being prosecuted for violation of export controls and will be denied fresh export licences for another six months {HT 24 Sep}. This action follows US protests to India about Indian sales of CW-agent precursors to Middle-Eastern countries (NYT 21 Sep). The company says that the shipment had commenced before trimethyl phosphite had been placed under Indian export control {Frontline (Delhi) 23 Oct}.

23 September In Israel, the Cabinet Secretariat announces that the Ministerial Committee for National Security has today considered, and decided to accept, the recommendation before it [see 30 Jul] that Israel should sign the Chemical Weapons Convention. It says that becoming an initial signatory will mark the continuation of government policy to advance the peace process. {Government Press Office 23 Sep in JPRS-TND 7 Oct}

23 September In Moscow, stage one of the latest chemdemil plan for the former Soviet CW stockpile [see 6 Sep] is outlined in the press prior to finalization by the Russian government and Supreme Soviet. Total program cost is estimated at R3.334 billion in 1991 prices, of which some 13-15 percent will, as decreed by President Yeltsin [see 12 Jun], go on infrastructure development, housing construction, health services and social benefits for the communities where the chemdemil facilities are to be built, such as Kambarka. In stage one, three chemdemil facilities will become operational and will destroy 45 percent of the total agent stockpile, including the 7000 tonnes of lewisite, mustard gas and mustard-lewisite mix held at Gornyy in Saratov Oblast and Kambarka in the Udmurt Republic and also 3.5 million projectiles which are to be destroyed at an unidentified former chemical weapons production facility. The CW agents are to be converted into useful products (including high-purity arsenic, rubber-vulcanizing agents, timber-treatment compounds and disinfectants) by processes currently under study at the Russian State Scientific Research Institute of Chemical Technology (formerly GSNIIOKhT [see 16 Sep]), a branch of the Karpov Physical Chemistry Institute in Obninsk and a scientific research institute in Nizhny Novgorod. The processes are to be considered at an international scientific conference next year. The juridical commencement date for stage one will be 1 April 1993. The chemdemil plants themselves will not start up until 30 June

1997. {Izv 23 Sep in FBIS-SOV 28 Sep}

The press reporting suggests that the location for the third (and perhaps the second, also) chemdemil site has not yet been chosen but indicates that a leading candidate is Production Facility No 3 of the *Khimprom* production association in the factory city of Novocheboksarsk, a facility which had produced VX nerve-gas from December 1972 onwards, employing some 2500 people, and which now consumes more than R135 million in annual maintenance costs. {KZ 24 Sep in FBIS-SOV 30 Sep}

23 September Chinese Foreign Minister Qian Qichen, speaking to the UN General Assembly, says: "After years of negotiations, the Chemical Weapons Convention has finally been concluded. It has laid an international legal basis for a world-wide elimination of such weapons of mass destruction. Though some of its provisions are not fair and balanced, the purposes and objectives defined in the Convention have nonetheless won the unanimous endorsement and support of the international community. We hope that these purposes and objectives will be observed and carried out effectively in the interest of the security of all countries." {A/47/PV.8}

24 September In Iraq, the first batch of nerve gas is successfully destroyed by hydrolysis in the chemdemil facility at al-Muthanna [see 12 Sep]: 350 litres of GB/GF. The batch size is expected to increase as operations continue.

24 September In Mannheim, Germany, the trial begins of Hans-Joachim Renner, a former managing director of Imhausen Chemie GmbH of Lahr [see 1 Aug 91], accused of responsibility for the design and construction of a chemical-weapons factory at Rabta in Libya {FA 25 Sep}. A fortnight later, the court finds the defendant jointly responsible for the company's illegal exports of goods to Libya during 1984-88 and sentences him to prison for two years {DPA in FA 7 Oct}.

25 September In Israel, Deputy Defense Minister Mordechai Gur speaks during a radio interview of the threat posed by Syrian production of chemical weapons, stating that Israel will continue to take action to stop it. "There is no need to panic, but we--those in charge of the defense establishment--must certainly view this with utmost seriousness", he says. {IDF Radio 25 Sep in FBIS-NES 28 Sep}

According to unidentified Israeli sources quoted by the Paris newsletter *Middle East Defense News* [see 3 Aug], the Syrian CW stockpile had in May been estimated at "several thousand aerial bombs, filled mostly with sarin", and 50-100 ballistic-missile warheads. *Mednews* also says: "Syria is now believed capable of producing several hundred tons of CW agents per year. Four production sites have been positively identified, one located just north of Damascus, and the second near the industrial city of Homs. The third, in Hama, is believed to be producing VX agents in addition to sarin and tabun. Officials in Washington identified a fourth facility dedicated to the production of biological agents in Cerin, while Israeli intelligence is monitoring several additional 'suspicious' sites." {*Mednews* 28 Sep; Simon Wiesenthal Center Report, August}

25 September Egyptian Foreign Minister Amre Moussa, addressing the UN General Assembly in New York, says that the League of Arab States has determined [see 12 Sep] that its members should sign the Chemical Weapons Convention only in the context of a Middle East region free of all weapons of mass destruction. In particular, Israel must allow its nuclear

facilities to be inspected under the international safeguards system provided for in the nuclear Non-Proliferation Treaty. {Guar 26 Sep}

25-27 September In England, at Wilton House, there is the third of the Wilton Park Arms Control Seminars, once again on CBW [see 20-22 Sep 91]. There are 47 participants from Austria, Canada, Finland, France, Germany, Hungary, Israel, the Netherlands, Pakistan, Peru, Russia, Sweden, Switzerland, the United Kingdom and the United States.

26 September In Bosnia-Herzegovina, chemical plants in Vitez are reported to have been bombed by Serbian aircraft, Radio Bosnia-Herzegovina stating that citizens there had been ordered to follow measures for protection against chemical poisoning. Croatian Radio quotes reports of chemical weapons being used in the fighting at Gradacac [see also 22 Sep]. {BBC-SWB 28 Sep}

28 September In the United States at Aberdeen Proving Ground, seven people are sent to the hospital for observation after possibly becoming exposed to phosgene when a supposedly inert Livens-projector round was being drilled open. {BS 1 Oct}

28-29 September In the United States, a team of 14 Russian scientists led by General Anatoliy Kuntsevich visits Tooele Army Depot to learn more about the US chemdemil program [see also 8 May]. {*Salt Lake Tribune* 30 Sep}

29 September In Iraq, UNSCOM 44 completes its chemical-weapons inspection work [see 21 Sep]. Chief Inspector Brunner tells reporters that the team had visited 10 sites around the country, including some suspect sites that Iraq had not declared. {AFP 26 Sep in JPRS-TND 7 Oct; AFP 29 Sep in BBC-SWB 1 Oct}

30 September Pakistan states at the UN General Assembly that it "fully subscribes to the objectives" of the draft CWC, completely sharing "the resolve of the international community to banish forever this hideous instrument of warfare". Its statement continues: "However, the draft Convention contains some provisions that cause us concern. It remains our hope that these shortcomings will be redressed to ensure universal adherence to this truly landmark document." {A/47/PV.7}

30 September The US Commerce Department Bureau of Export Administration publishes a rule amending its Special Chemical License procedure to provide "substantially increased flexibility for exporters without detriment to the nonproliferation objectives of the control program". {FR 30 Sep}

1 October The US Army provisionally establishes a new command, the Chemical and Biological Defense Agency (CBDA), to manage its spending for chemical and biological programs, reflecting an increased emphasis on CBW defense. The CBDA is to report directly to the Army Materiel Command (AMC) and be responsible for research, development and acquisition of all CBW defense within the Department of the Army. It is commanded by Brigadier George Friel and headquartered at the Edgewood Area of Aberdeen Proving Ground. It subsumes the US Army Chemical Research Development and Engineering Center (CRDEC), now renamed 'Edgewood RDE Center', and a number of other AMC and DOD wide units

as well, including the AMC Executive Agent Office for US Chemical Treaty Compliance, the Program Director for Biological Defense Systems, the Project Manager for NBC Defense Systems, the Product Manager for Smoke/Obscurants, and the Program Manager for Rocky Mountain Arsenal. {DN 12 Oct; JDW 17 Oct; CBIAC Newsletter Fall 1992; CBDA news release 22 Oct}

1 October In the US House of Representatives, the Armed Services Committee special panel on CBW defense [see 19 May] is told by the Deputy Assistant to the Secretary of Defense for Chemical Matters, Dr Billy Richardson, that the US biological defense program has been "inadequate". Dr Richardson identifies priority tasks ahead, including development and expansion of biological detection systems. {*Armed Forces Journal International* November; C&EN 9 Nov}

1 October In the US Congress, a House-Senate conference committee reaches agreement on the FY 1993 Defense Authorization Act [see 4 Jun]. The conference report extends the statutory completion date for eliminating the US chemical-weapons stockpile from 31 July 1999 to 31 December 2004. It directs the Secretary of the Army to establish Chemical Demilitarization Citizens' Advisory Commissions in each of the three states where less than 5 percent of the stockpile is held and also in any of the other repository states that may request one. The Army is also required to submit, by 31 December 1993, a report to the Congress assessing, against criteria specified in the legislation, alternative chemdemil technologies and responding to the report on the same subject that is due from the National Academy of Sciences [see 3-5 Jun]. Further, the Army is directed to report to the Congress, by 1 February 1993, its plans for destroying "all chemical warfare material of the United States not covered by section 1412 of the Department of Defense Authorization Act, 1986 (50 USC 1521), that would be required if the United States became a party to...the proposed international Chemical Weapons Convention".

The Army is also directed to report on the condition and integrity of the US stockpile of chemical weapons by 1 May 1993.

Regarding US assistance for, *inter alia*, the Russian chemdemil program, the conference report authorizes a \$400 million increase in the Nunn-Lugar funds [see 20 Jun].

Also in the conference report is authorization of \$168.1 million "to combat the proliferation of weapons of mass destruction", part of it to "develop non-proliferation technologies" and part to "support international non-proliferation activities". {House Report 102-966}

2 October To be known as the *International Center for Disarmament and Conversion* and to have offices in Washington and Moscow, a new non-governmental not-for-profit organization is established jointly by the Russian President's Commission on CBW Convention Problems and an organization affiliated with the US consulting firm EAI Corporation [see 10 Jul], the Virginia-based Chemical and Biological Arms Control Institute [see 10 May 91]. The agreement is signed by the chairman of the former and the executive director of the latter, General Anatoliy Kuntsevich and Dr Benjamin Garrett, respectively. The purpose of the Center is to "foster international cooperation toward total compliance with the goals of the Chemical Weapons Convention, particularly including the destruction of chemical weapons stockpiles; promote successful implementation of a verifiable inspection regime which balances legitimate private and government confidential-

ity interests with the need to halt proliferation of chemical and biological weapons; and support appropriate efforts to convert military chemical and biological weapons research and production capabilities to peaceful, civilian purposes". Initially it will be providing an additional channel for contacts between US firms and Russian chemdemil officials. {Chemical and Biological Arms Control Institute press release, 6 Oct}

5 October In the United States new public law blocks, at least temporarily, Army use of incineration for its chemdemil program {PL 102-380}. The 1993 Military Construction Appropriations Act entering the statute book today disallows the \$105 million sought for construction of an incinerator at Anniston Army Depot and prohibits any related construction work there other than site preparation until the Congress has reviewed the Army's report, due by 31 December 1993, on alternative chemdemil technologies [see 1 Oct]. {House Report 102-888; DW 19 Oct; C&EN 26 Oct}

7 October In the Sarajevo region, Serbian forces use "some poisonous gases" according to Radio Bosnia-Herzegovina. This is denied by the Main Headquarters of the army of the Serbian Republic, which states that the Serbian forces do not have poisonous gases [see also 26 Sep]. {Tanjug 7 Oct in BBC-SWB 10 Oct}

7 October At the UN General Assembly in New York, a draft resolution commending the Chemical Weapons Convention, as contained in the report of the CD [see 3 Sep], is tabled in the First Committee. The draft resolution, managed by Germany, has 132 co-sponsors {A/C.1/47/L.1}. The quest for additional co-sponsors continues. The deadline for submission of resolutions on Assembly agenda item 60, Chemical and Bacteriological (Biological) Weapons, is 28 October, with action on them scheduled for the period 12-18 November {A/C.1/47/2}.

9 October US CD Ambassador Stephen Ledogar, in a press interview, predicts that China, Russia and member-states of the Arab League will eventually sign the Chemical Weapons Convention even though they are not among the co-sponsors of the draft UN resolution commending the treaty [see 7 Oct].

He says that bilateral US-Russian talks have just resumed aimed at revising the June 1990 bilateral chemical-weapons destruction agreement. The destruction schedule is likely to be extended. Russia is seeking Western economic and technical aid to begin the destruction. {DN 19 Oct}

9 October The US Army Armament Research Development and Engineering Center at Picatinny Arsenal announces that it is exploring development of "more than a dozen non-conventional less-than-lethal munitions technologies". Examples include "advanced riot control agents" that could "immobilize rapidly, retain their effectiveness for short periods of time and leave no permanent side effects" [see also 3 Jun]. Optical munitions, acoustic beams and high-powered microwave projectiles are also mentioned. This work is proceeding both within the Low Collateral Damage Munitions program at Picatinny and within the Joint Service Small Arms Program. {DN & DW 19 Oct; JDW 31 Oct; NJ 7 Nov} [See also 4 Sep]

10 October In Bosnia-Herzegovina, the headquarters of the Tuzla regional command announces that it has been "forced...to prepare to deploy tankers filled with chlorine

along the Bosanska Bijela-Brcko railroad and in the northern foothills of Mt Majevica" in readiness to use the chlorine—"the last efficient weapon we possess"—for self-defense and to "protect the people of this region from the ruthless enemy" {Radio Bosnia-Herzegovina 10 Oct in FBIS-EEU 13 Oct}. [See also 10 Aug and 22 Sep] Some 500 tons of chlorine and 1000 tons of chlorine compounds are thought to be on hand in Tuzla chemical-industry facilities {SZ 14 Oct}.

Next day the UN Security Council is informed of this "chlorine shield" strategy by the Bosnian ambassador to the UN, who says that his government is seeking to dissuade so desperate an act. {S/24651}

12 October In London, at the Old Bailey criminal court, the trial begins of three former directors of the Coventry-based, Iraqi-owned company Matrix Churchill, manufacturers of machine tools, charged with breaching export regulations during 1988-90 so as to evade the ban on military sales to Iraq. The exports in question were machine tools and associated computer software, as well as training services for Iraqi users. End applications of these inherently dual-use items are said by the prosecution to have included the manufacture of bomb components. The trial is expected to last about eight weeks. {FT 13 Oct}

Internal UK government papers later submitted in evidence show that export licences had been granted even though the company was known to have lied in saying that the equipment was solely for civilian end-uses, and even though government officials suspected that some of the equipment was destined for Iraqi chemical-weapons factories {FT 12 Nov}. The papers also show that the company provided British intelligence agencies with regular reports on the company's activities and thus on Iraq's overseas procurement network; and its managing director had been an informant of the Special Intelligence Service since 1973 {NYT 27 Oct; TL 15 Nov}.

The prosecution case collapses when, on 4 November, a former minister in the Department of Trade testifies that, during his involvement in approving the exports, he had encouraged the company to conceal what he knew was the military end-use of the machine tools {FT & NYT 10 Nov}.

12-28 October The UN General Assembly First Committee debates the disarmament and international security items on the agenda of the current session of the Assembly, amongst which is item 60, under which the resolution commending the draft Chemical Weapons Convention [see 7 Oct] is to be considered.

Ambassador Kamal Kharrazi of Iran, who is among the cosponsors of the resolution, expresses the hope that the "shortcomings of the Convention", such as the way it defines 'chemical weapons' [see 4 Aug], will be overcome when it is prepared for implementation. {IRNA 15 Oct in FBIS-NES 15 Oct}

Ambassador Herbert von Arx of Switzerland says: "My country would have preferred that the verification measures, in particular those concerning challenge inspections, be less complicated and more binding. The text...is indeed very ambitious, and its many technical details may prove difficult to implement."

Ambassador Yehiel Yativ of Israel, speaking in support of the CWC, says that "the universality of the Convention must be duly guaranteed" and specifies four particular concerns his country has [see also 30 Jul]: "all countries of the region must join the Convention and fulfill its obligations"; proce-

dures for election to the Convention's institutions must guarantee "the right of election of all member states to the governing bodies"; "it must be absolutely guaranteed that the Convention will not be abused in its application, either technically or politically, especially with regards to the application of challenge inspections"; and the CWC "must be considered on its own merits and should be supported without any linkage".

Ambassador Mounir Zahran of Egypt says his country supported the CWC "within the framework of efforts aiming at establishing...a zone [free of all weapons of mass destruction], as soon as Israel responds positively to the calls addressed to it to accede to the NPT and agrees to subject all its nuclear facilities under the safeguard mechanism of the IAEA". {DT 9 Nov} [See also 25 Sep]

15 October In Serbia, the psychochemical BZ is being manufactured at Kruselak, near Belgrade, alongside the irritant CS, according to unidentified Croatian sources reported in *ASA Newsletter* which also reports that, besides the "proven" employment of weaponized CS and CS1, use of BZ by Serbian forces "is strongly suspected" [see also 7 Oct]. *ASA Newsletter* also writes of past pilot-scale production of sarin and mustard gas in Yugoslavia, and the filling of these agents into test quantities of munitions for tube and rocket artillery. {*ASA Newsletter* 15 Oct}

16 October In Iraq, the largest team yet of UNSCOM inspectors arrives, preceded by a formal warning to Iraq from the UN Security Council after a public speech in which Saddam Hussein had described UN inspectors as "stray dogs eating the flesh of the nation" {NYT 16 Oct; *Al-Thawrah* 22 Oct in FBIS-NES 26 Oct}. The 50-strong team, UNSCOM 45, is led by Nikita Smidovich of Russia. He tells reporters that his mission is primarily in the ballistic missile area but that his team includes experts on nuclear, chemical and biological weapons as well {IHT 17-18 Oct}.

18 October From Russia, further details of the novel nerve-gas development program in a hitherto secret Moscow research institute [see 16 Sep] are published by the *Baltimore Sun*. The new poison is described as one of a series, known as 'Novichok' (Russian for 'newcomer'), whose development had begun in 1982 in a program codenamed 'Foliant'. An account is given of someone who had survived an accidental exposure to Novichok No 5.

The *Sun* also reports Russian officials observing that neither Russia nor the Soviet Union before it had said it would cease CW-agent development work prior to entry into force of the Chemical Weapons Convention. {BS 18 Oct}

19 October Turkey will join the Australia Group, Foreign Minister Hikmet Cetin announces in Ankara. {Turkish Radio 19 Oct in BBC-SWB 21 Oct}

19 October Australian Ambassador for Disarmament Paul O'Sullivan distributes to UN missions in New York a paper which, he writes in his covering letter, "sets out the initial thinking of some Geneva based delegations on a range of issues relating to the Preparatory Commission for the Organisation on the Prohibition of Chemical Weapons".

20 October In Seoul, South Korea, the Defense Committee of the National Assembly is told during a briefing from the Joint Chiefs of Staff that North Korea is now armed with more

than 1000 tons of CW agents {Yonhap 21 Oct in BBC-SWB 22 Oct}. The committee later receives a report from the Agency for National Security Planning in which further particulars are given. The report states that North Korea began to develop both chemical and biological weapons in the late 1960s, starting production of CW agents such as chloropicrin and cyanogen chloride a few years later; current production capacity is around 5000 agent-tons per year in 9 facilities. The North Korean employment concept envisages chemical weapons being used for rapid breakthrough of forward defenses, the report says, and also as an instrument of political and psychological threat to South Korea. {Yonhap 23 Oct in BBC-SWB 27 Oct; FR 24 Oct}

The North Korean Foreign Ministry subsequently describes the report as an American-inspired fabrication {KCNA 30 Oct in FBIS-EAS 30 Oct; Korean Network 30 Oct in FBIS-EAS 2 Nov}.

20 October Radio Croatia reports a recurrence of sightings of mysterious spider-web-like materials [see 7-8 Nov 91] in eastern Slavonia following overflights by Yugoslav aircraft.

20 October In Poland the government adopts a draft export-control law providing for special inspection and supervision of foreign trade in categories of goods and technologies that could be used for production of CBW and other weapons. {PAP 20 Oct in BBC-SWB 23 Oct}

21 October In Israel, the IDF Home Front Command embarks upon a program to check the gas-masks in issue to the general public [see 26 Aug], replacing faulty or outmoded masks and providing new ones to people who had not previously received them {Voice of Israel 21 Oct in BBC-SWB 22 Oct}. Over the next 10 months, 5 million respirators of improved design may be issued to all Israelis. Military analysts say the timing of the distribution, which coincides with resumption of the Middle East peace talks in Washington, has no strategic significance. {IHT 22 Oct}

22 October In Moscow, Dr Vil Mirzayanov, principal source of the recently published information about continuing Russian development of nerve gases [see 18 Oct], is arrested by security police and charged, nine days later, with unauthorized disclosure of state secrets {NG 23 Oct in FBIS-SOV 23 Oct; Izv 24 Oct; BS 23 Oct; WP 27 Oct; Reuter in FT 29 Oct & TL 30 Oct; Izv 3 Nov in FBIS-SOV 4 Nov}. Two days before his arrest, he had given a further press interview, soon to be published in the Moscow weekly *Novoye Vremya* {*Novoye Vremya* 27 Oct in FBIS-SOV 3 Nov; *New Times*, No. 45}.

In this latest interview, he had said that his institute had created a new toxicant about two years ago "which, in terms of its combat characteristics, is 5-8 times superior to the most toxic" of the V-agents. "If someone is affected by it, even if it only gets on the skin, it is practically impossible to effect a cure". Based on it, he continued, "we developed our own binary weapons, which proved considerably more effective than the US ones....[U]nlike the US binary weapon...one of the components in our weapon is a [toxicant]". He said that, for the field-testing in Uzbekistan, 5-10 tons had been produced at the plant in Volgograd.

He had also spoken of past Soviet CW-weapons work. Soman, he said, was still being produced two years after the Soviet leadership had announced to the world that production of chemical weapons in the USSR had ceased. What he called "the mightiest enterprise in the USSR for the produc-

tion of chemical weapons", the Novocheboksarsk Chemical Combine [see 23 Sep], had started up at the end of the 1960s. In 1964 there had been a huge fish-kill in the Volga River when plant effluent from production of sarin in Volgograd accidentally entered the river. On the size of the former Soviet CW-agent stockpiles, he had said: "When I was working in the institute, specialists said that we had approximately 60,000 to 70,000 tonnes. I have never heard the figure of 40,000 tonnes [see 6 Sep]".

Interviewed with him (as in earlier interviews), but not subsequently arrested, had been Dr Lev Fedorov, a professor of chemistry at an Academy of Sciences institute in Moscow and an environmental activist. He also gave details of former Soviet CW activities. The agent production facility at Chapayevsk had manufactured blister gases from 1942 through to the end of World War II at a rate of 1500 tonnes per year. "Production was completely open: mustard gas and lewisite were poured into shells from kettles and scoops... In nearby villages and hamlets there is probably no family which has not had a relative die in chemical production." A captured German factory was dismantled and reassembled in Dzerzhinsk, where it operated until around 1952, producing mustard and lewisite. Soman had replaced sarin in the early 1960s.

Like Dr Mirzayanov, Dr Fedorov did not identify the chemical structure of the new nerve gas, but he did say that neither of its two binary components was among the precursors itemized in the CWC control schedules.

23 October In New York, co-sponsors of the draft UN General Assembly resolution commending the CWC [see 7 Oct], who have been meeting in conference under the chairmanship of Ambassador von Wagner of Germany, establish a consultative group, chaired by Ambassador Paul O'Sullivan of Australia, with a representative from each of the five regional groupings specified in Article VIII of the CWC, to advance the consensus-building process on how the CWC Preparatory Commission is to be structured, and who is to fill its key positions [see 19 Oct]. This "Gang of Five" has three main issues to resolve, all interlinked: chairmanship of the PrepCom; size and composition of the Bureau to assist the chair, which the PrepCom must also elect, and the responsibilities of individual Bureau members; and appointment of an Executive Secretary, whose tasks will include developing the provisional Technical Secretariat.

24 October President Bush signs the Freedom Support Act [see 6 Aug] into US public law, by now largely symbolic but reflecting Congressional consent to part of a multinational aid plan for the former Soviet Union. The Congress had finally passed the legislation earlier in the month. It has now made available a total of \$800 million, including last year's Nunn-Lugar funds, to help the dismantling of ex-Soviet weapons of mass destruction. {CQ 10 Oct}

25 October In Abkhazia, the Defense Ministry denies Georgian-Army accusations that it has been using chemical projectiles. Its statement says that Abkhazia has never had chemical weapons and that it is prepared to grant any independent commission the opportunity to check that this is so. {InterFax 25 Oct in FBIS-SOV 26 Oct}

26 October In Russia, the Supreme Soviet is considering the latest draft chemdemil plan [see 23 Sep], *Complex Program of the Stage-by-Stage Elimination of Chemical Weapons*

in the Russian Federation. A network of four chemdemil facilities is proposed in the draft: in the towns of Novocheboksarsk in Chuvashiya; Kambarka in Udmurtiya; Volsk-17 in Saratov Oblast; and Gornyy in Saratov Oblast. There are plans, too, to establish in Moscow a national center for monitoring the elimination and nonproliferation of chemical weapons. {ITAR-TASS 26 Oct in FBIS-SOV 27 Oct}

The head of the Russian chemdemil program, General Kuntsevich, subsequently says in a press interview that the first level of the program described in the draft plan would cost R45bn in 1993 prices, of which R4.4bn would be spent next year. He says, too, that \$4.5mn will be needed to purchase equipment abroad. {InterFax 30 Oct in FBIS-SOV 2 Nov}

The Kambarka facility will be used as a terminal to transfer the 6800 tons of lewisite held there into new containers for shipment to a reprocessing facility [see also 6 Sep]. The Gornyy facility will serve as a similar terminal for the 700 tons of mustard, 230 tons of lewisite and 224 tons of mustard-lewisite mixture stored nearby. The Volsk-17 facility will be a pilot reprocessing plant. The Novocheboksarsk facility will be a former nerve-gas production plant [see 22 Oct] converted to a 1300 ton/yr detoxification facility for chemdemil of artillery rockets and projectiles filled with 9800 tonnes of sarin, soman and VX stored near Kizner in Udmurtiya and Shchuchye in Kurgan Oblast. {Izv 4 Nov in FBIS-SOV 5 Nov; ITP 12 Nov}

26 October Australian Ambassador for Disarmament Paul O'Sullivan distributes a further paper on the CWC Preparatory Commission [see 19 and 23 Oct] at the UN General Assembly in New York. This one, he says in his covering letter, sets out "the initial thinking of a number of Geneva-based delegations on some financial issues". Potential states signatories are asked to consider making advance payments against their future assessed contributions to the funding of the PrepCom. The paper, which had been prepared by the British CD delegation, estimates the total costs of the PrepCom during its first three months at \$1.8 million.

26-29 October In Stockholm and Bonn there are successive two-day meetings of a group of technical experts from East, West and non-aligned countries in preparation for VEREX II, the second session, due to start on 23 November, of the Ad Hoc Group of Governmental Experts established by the Third BWC Review Conference to explore possible verification measures for the treaty [see 10 Apr]. The meetings succeed the British one in July. The Stockholm meeting, convened by the Swedish government, considers technical and scientific aspects of on-site inspection. The Bonn meeting, convened by the Federal German government, considers other possible verification measures.

27 October In the US Congress, now in recess, the Senate Committee on Banking, Housing, and Urban Affairs conducts an oversight hearing on US export licensing policy toward Iraq prior to the Iraqi invasion of Kuwait. It receives testimony from the chairman of the corresponding House Committee, Congressman Henry Gonzalez, who has long been leading a Congressional investigation of the Banca Nazionale del Lavoro loans to Iraq and other aspects of US aid to that country. {NYT 28 Oct} Administration officials decline to testify. [See also 12 Oct]

27 October UN Secretary-General Boutros Boutros-Ghali, introducing his report *New Dimensions for Arms Regulation*

and *Disarmament in the Post Cold War Era* to the First Committee of the UN General Assembly, urges universal adherence to the Chemical Weapons Convention.

28 October Egyptian Foreign Minister 'Amr Musa, in a press interview, says that Egypt "will not join an agreement about chemical weapons unless Israel participates in the international nuclear order". {MENA 28 Oct in FBIS-NES 29 Oct} [See also 25 Sep]

28 October The UN Secretary-General distributes his second six-monthly report on implementation of the plans approved under Security Council resolution 715 (1991) for the ongoing monitoring and verification of Iraq's compliance with its obligations not to use, retain, possess, develop, construct or otherwise acquire any CBW or nuclear weapons or longer-range ballistic missiles [see 18 Mar]. In regard to CBW, the report states that Iraq has still not given the necessary undertakings and submission of information that would allow implementation of the plan to begin. {S/24716}

28 October Israel, Russia and Kazakhstan join as co-sponsors of the draft UN General Assembly resolution, now amended somewhat, commending the Chemical Weapons Convention [see 7 and 12-28 Oct], bringing the total to 138 {US Mission in Geneva press release, EUR413, 29 Oct}. When the amended draft resolution is formally tabled next day, it has 139 co-sponsors {A/C.1/47/L.1/Rev.1}.

29 October In New York, the United Nations Office for Disarmament Affairs and the UN Department of Public Information, in cooperation with the NGO Committee on Disarmament, co-sponsor a public forum on the draft Chemical Weapons Convention. {DT 24 Nov}

30 October President Alija Izetbegovic of Bosnia-Herzegovina, visiting Tehran, says on Iranian radio that Bosnians would be forced to use "poison gas in existence in Bosnia" against advancing Serbs unless the arms-embargo against his country is lifted. He is thought to have been referring, again [see 10 Oct], to poisonous industrial chemicals available in factories at Tuzla, not to actual chemical weapons. {Voice of Iran 30 Oct in FBIS-NES 30 Oct; AP in IHT 31 Oct; TL & NYT 31 Oct}

30 October Concerning the international aid flights into Sarajevo, the German Air Force confirms that all countries taking part have now equipped their air crews with CBW protective clothing and respirators, the reason being an announcement by the Canadian Air Force about the existence of a CW-munitions depot in the Sarajevo area. {FAZ 31 Oct}

2 November In Moscow, Dr Vil Mirzayanov [see 22 Oct] is released from custody on his own recognizance {Izv 3 Nov in FBIS-SOV 4 Nov; BS 3 Nov}. The charge against him, under Article 75 of the RSFSR Criminal Code, has not been dropped, meaning that he still faces the possibility of at least a two-to-five year jail sentence {InterFax 3 Nov in FBIS-SOV 3 Nov}. The public relations center of the Ministry of Security makes it known that, while Dr Mirzayanov had been employed, he had signed an undertaking not to divulge the nature of his activities {Moscow Central Television 5 Nov in FBIS-SOV 12 Nov}.

General Kuntsevich, in a subsequent press interview, suggests that Dr Mirzayanov had disclosed a state secret

merely by announcing publicly that a particular institute was working on CW agents, "particularly when we and the Americans have not yet exchanged data on the structure of facilities developing chemical weapons". He adds: "I do not think there could have been any tests in Nukus [see 16 Sep] in 1991-1992". {RG 11 Nov in FBIS-SOV 19 Nov}

3 November From the Ingush-Ossetian conflict in the Caucasus, there are reports attributed to doctors in Grozny of chemical burns among wounded Ingushes brought for treatment there. The reports have stimulated speculation about Ossetian use of chemical shells. {ITAR-TASS 3 Nov in FBIS-SOV 3 Nov}

4 November In Washington, the Center for Strategic & International Studies hosts a roundtable on Biological Weapons in the 1990s: New challenges, New Policies?

4-9 November In Iraq, a visiting UNSCOM team led by Ron Manley of the UK commissions the incinerator that has been built at al-Muthanna to destroy mustard gas [see 24 Sep]. Eight tons of the agent are burned during the visit. When full-scale operations begin, in the next few days, the burn rate should soon reach about 3.5 tons per day. The al-Muthanna chemdemil facility has 34 resident UNSCOM personnel and 200-400 Iraqi staff. {Ind 5 Nov}

9 November At the UN General Assembly, a second revision of the draft resolution commending the CWC [see 28 Oct] is tabled in the First Committee. The resolution now has 144 co-sponsors.

There is a final meeting of the Cosponsors Group [see 23 Oct]. Australia distributes a third paper on the CWC Preparatory Commission, *PrepCom Costing—the First Year*, described in Ambassador O'Sullivan's cover letter as having been "prepared jointly by a number of Geneva-based Western delegations". It sets out cost estimates for the first year's operations of the PrepCom and includes a projected table of establishment. The estimates total \$9.87 million.

Germany and Italy distribute a joint paper setting out draft rules of procedure for the first session of the PrepCom. One of its potentially controversial features is its proposal that "plenary meetings of the Commission shall be held in private unless the Commission decides otherwise".

Other national papers besides the earlier Australian ones [see 19 and 26 Oct] had been distributed beforehand. They included an Iranian paper setting out a structure for the PrepCom rather different from that envisaged in the first Australian paper, a German paper on the projected Verification Division of the provisional Technical Secretariat, a South African paper commenting on the German one, and a New Zealand paper on the specific implementation tasks facing a small country, including the establishment of its Article VII National Authority.

The situation thus far reached in the Gang-of-Five consultations on the PrepCom [see 23 Oct] is summarized as follows:

"Chairman:

There was broad agreement but no consensus that the chairmanship should rotate and that the rotation should be on a six monthly basis.

There was no agreement on which group should start the rotation, it being felt that more discussion was needed and that the question could only be resolved after the process of nominating an Executive Secretary had been taken further.

"Executive Secretary:

There was agreement to encourage as early advice as possible about intentions to nominate candidates for this position by states which are potential signatories to the Convention. To this end, the Chairman of the Cosponsors Group wrote to all states eligible to become signatories to the CWC. Consultations have also been held within the regional groups. So far there has been advice of three candidates.

"Bureau:

There was broad agreement, but no consensus, to consider questions concerning the Bureau at this stage. Some favoured a rather small Bureau (5); there was some support for a Bureau of 15; most expressed a preference for 10.

There was no agreement on whether the Bureau should be fixed for the period of the Prepcom or whether it should rotate, and how that might be done. Views varied on how best to strike a balance between the efficiency and the representativeness of the Bureau, particularly if Bureau members were also to serve as Chairmen of working groups."

9 November The US House Armed Services Committee panel established in May to report, under the chairmanship of Congressman Glen Browder, on CBW defense preparedness issues [see 1 Oct] is now in London beginning a 9-day European tour in which it will meet with British, Dutch and German officials and visit CBW defense establishments. {News release from the Office of Congressman Browder, 9 Nov}

9 November In Washington, the new International Center for Disarmament and Conversion (ICDS) [see 2 Oct] sponsors a briefing by General Anatoliy Kuntsevich on the status of Russian chemdemil plans. General Kuntsevich says that, on 30 October, a committee of the Russian legislature had approved the plan [see 26 Oct] to convert an existing chemical-weapons production facility to chemdemil production and to build two other chemdemil facilities. He says that, while US companies are expected to play a leading role in building these facilities, Moscow has also signed an agreement with Germany [see 6 Sep] and has initiated talks with French and Italian companies. He urges the US Defense Department to make haste in finding the requisite American contractor [see 21 Aug] (ITP 12 Nov). Quoting unidentified sources, *Defense News* later reports that the US Government, in addition to the \$25 million in Nunn-Lugar funds already earmarked for the Russian chemdemil program [see 30 Jul], has since pledged an additional \$30 million {DN 16 Nov}.

The Center announces that there is to be a major three-day international conference in Moscow next May on CBW disarmament, destruction and industrial conversion. {ICDS press release 9 Nov}

12 November At the UN General Assembly in New York, the First Committee adopts by consensus the 144-nation resolution commending the Chemical Weapons Convention [see 9 Nov] {DT 24 Nov}. Among other things, the resolution welcomes the invitation of the President of the French Republic to participate in a ceremony to sign the Convention in Paris on 13 January 1993, and requests the UN Secretary-General, as Depositary of the Convention, to open it for signature then. The resolution further empowers the Secretary-General to provide services to initiate the work of the Preparatory Commission for the Organization on [sic] the Prohibition of Chemical Weapons.

Not included among the co-sponsors of the resolution are China [see 23 Sep] and Pakistan [see 30 Sep], as well as Egypt and the other Arab League countries [see 25 Sep, 12-18 Oct and 28 Oct].

15 November In Cambodia, a clandestine Khmer Rouge radio broadcast alleges that, in ten days time, the government intends to use toxic chemicals against the National Army of Democratic Kampuchea in the Thai border region. {Voice of Cambodia 15 Nov in FBIS-EAS 16 Nov}

16 November The British government informs Parliament of its policy towards the Australia Group now that the CWC is completed: "The Australia Group harmonises national export controls by consensus. It is for each member state to apply its individual controls. The Australia Group (AG) has undertaken [see 6 Aug] to review its work to ensure consistency with the provisions of the chemical weapons convention. AG members, including the United Kingdom, have declared their intention to be early [*sic*] signatories of the Convention. In this context, the United Kingdom will seek to ensure within the AG and nationally that we maintain effective controls against CBW proliferation." {HansC 16 Nov}

17-20 November The US Army holds its annual Scientific Conference on Chemical Defense Research at Edgewood RDE Center, Aberdeen Proving Ground.

18 November The British government tells Parliament that it expects the UK's Single Small Scale Facility under the CWC to comprise a small area containing a specialist laboratory and associated storage buildings within the Chemical and

Biological Defence Establishment at Porton Down. {HansC 18 Nov}

20 November In Croatia, the official Army journal *Hrvatski Vojnik* carries an account of recent work by the Army's first NBC decontamination unit, which had been formally established on 5 November: "One of the most difficult tasks was the decontamination of former JNA barracks. These are very large areas from which the JNA had not managed to evacuate a large amount of grenades with chemical warfare agents, so they had simply dumped them in ditches, etc." No details are given of the chemical agents referred to.

23 November In Geneva, the Ad Hoc Group of Governmental Experts established by the Third BWC Review Conference convenes for its second session, 'VEREX II', to explore possible verification measures for the treaty [see 16 Jul]. The session is due to end on 4 December.

25 November At the Quaker United Nations Office in Geneva, the Federation of American Scientists and the NGO Committee convenes a panel of non-governmental specialists in BW matters to provide an early-evening briefing for VEREX II experts [see 23 Nov].

30 November The UN General Assembly adopts without vote its First Committee's resolution commending the Chemical Weapons Convention. {AN-NA 2 Dec}

Investigating Alleged Uses of Chemical Weapons

A Workshop on "Alleged Uses of Chemical weapons", organized by the Swedish government, was held in Geneva during December 16-17. Attended by representatives of more than 40 countries, the Workshop sought to provide an overview of past UN, national and independent investigations of alleged CW in order to help identify the technical and organizational needs of the future OPCW Technical Secretariat for conducting such investigations.

Under Articles IX and X of the Convention, any State party may request an investigation of an alleged use of chemical weapons. As specified in the Annex on Verification, the Director-General of the Technical Secretariat is then responsible for dispatching an inspection team to the site of alleged use at the earliest opportunity, within 24 hours if possible. The inspection team has the right of access to any relevant site on the territory or under the jurisdiction or control of a State Party and the right to conduct interviews and collect samples. Detailed procedures for the conduct of investigations and a roster of experts whose specialized knowledge and skills might be needed are to be developed in advance by the Director-General.

Drawing on the experience of past investigations, Workshop participants discussed the role of various kinds of expertise needed by inspection teams, including knowledge of chemical and conventional weapons, medical effects of CW agents, local health and environmental factors, interview procedure, the relevant language and culture, communications and navigation and, for the team leader, qualification in the conduct of challenge inspections.

The Workshop included presentations by participants in investigations of alleged CW use in Laos-Cambodia, Iran-Iraq, Angola, Mozambique and Azerbaijan. Definitive evidence of the use of chemical weapons other than riot-control agents was obtained only in the case of the 1984-1988 UN inves-

tigations in Iran and Iraq, where investigating teams found residues of mustard and nerve agent, chemical munitions and characteristic medical signs and lesions.

Regarding the US allegations of mycotoxin warfare in Laos and Cambodia in the early 1980s, a paper presented to the Workshop by three officials of the Australian Departments of Defense and Foreign Affairs stated that "By May 1983, we had come to the conclusion that the use of chemical weapons in Laos and Cambodia may have occurred, but there was no hard evidence for this. Certainly, we were sure that mycotoxins had not been used."

In Angola, during the recent civil war, widespread stories and unexplained outbreaks of a chronic lower-limb neuropathy among young men in military areas caused much apprehension in the local population. Nevertheless, on-site investigations by South African military personal recounted to the Workshop found no conclusive evidence of CW. Neither was such evidence found by Swedish or UK teams that had investigated allegations of a CW event in Mozambique in January 1992. No chemical agent residues or munitions were found and such symptoms as were exhibited, although resembling those expected for anticholinergic agents, could also have been caused by heat stress. Finally, the Workshop heard a report from a member of the team dispatched to Azerbaijan in July 1992 by the UN Secretary-General in response to an Armenian request for investigation of allegations that Armenia had used CW in Azerbaijan. After examining alleged victims, interviewing alleged witnesses, inspecting alleged munitions and fragments and reviewing Azeri chemical analytical procedures, the team concluded that it had found no evidence of CW.

It is the intention of the Swedish organizers to publish a report about the workshop in due course. ▣

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Forthcoming Events

● During 13-15 January, the Government of France will host an official Signing Conference for the Chemical Weapons Convention in Paris.

● During 13-14 January, also in Paris, Parliamentarians for Global Action will hold a "Parliamentary Symposium on the Chemical Weapons Convention." For more information, contact Walter Dorn at (212) 687-7755.

● On 21 January 1993 the Woodrow Wilson Center in Washington, D.C. will convene a seminar on "The

Biological Weapons Program in the former USSR." For more information call (202) 287-3400.

● At Aberdeen Proving Ground-Edgewood Area, MD, the U.S. Army Research, Development and Engineering Center will sponsor the "7th International Simulant Workshop" during 2-4 March 1993. For more information contact Mr. George R. Famini, U.S. Army CRDEC, Attn: SMCCR-RSP-C, Aberdeen Proving Ground, MD 21010-5423.

● The Chemical Systems Division of the American Defense Preparedness

Association will hold a conference on 12-14 May 1993 on "Joint CB Defense in Power Projection Operations." For further information contact W. Bruce Holt at (703) 522-1820.

● The International Center for Disarmament and Conversion, in conjunction with the (Russian) President's Committee on Chemical and Biological Weapons Convention Matters, will host a conference on chemical and biological weapons disarmament and destruction and industrial conversion in Moscow, 19-21 May. For more information contact Kyle Olson at (703) 739-1538.