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TIME TO WRAP UP

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The negotiations for the Protocol to the Biological Weapons Convention (BWC) are now coming to the end of their fifth year. Having begun in January 1995, the Ad Hoc Group (AHG) will have met for a total of 44 weeks by the end of 1999.

These five years of work should not, however, be seen in isolation, or as the start of a new process. The negotiations are the culmination of a process begun many years ago. Both the 1986 and 1991 Review Conferences of the BWC instituted procedures that aimed to build confidence among states parties to the BWC. At the Third Review Conference in 1991 the states parties also approved a study of possible verification measures by scientific experts, the VEREX process. This study resulted in the 1994 Special Conference and the formation of the AHG with its mandate to negotiate a Protocol *to strengthen the effectiveness and improve the implementation* of the Biological Weapons Convention.

Since 1995 the work of the AHG has moved through three stages. First, from 1995 to mid-1997 the preliminary work of the AHG built upon the VEREX negotiations and final report to identify elements of a Protocol. The July–August 1997 session of the AHG witnessed the transition to a rolling text of the draft Protocol and initiated the second phase of the negotiations; the inclusion of detailed provisions in the Protocol and an intensification of the work of the AHG, as called for by the states parties at the Fourth Review Conference. January 1999 saw the third phase of the negotiations, the move to a final framework for the Protocol and the detailed negotiation on key elements.

It is timely and relevant to look back at the evolution of the negotiations to consider what needs to be done in the period ahead of us.

At the March 1997 session the AHG requested the Chairman to submit to the Group a document reflecting in a structured manner the progress of the work of the AHG during its six previous sessions. Thus, I presented a draft rolling text at the beginning of the seventh session. This rolling text became the basis of the work of the AHG.

In the period July 1997 to the beginning of January 1999 the AHG had a total of 17 weeks of negotiations. During this period the AHG further developed the preliminary elements of the draft Protocol into a more coherent

framework. Delegations inserted new concepts and debated fully many of the contentious issues with a view to developing language in the Protocol that would serve the needs of all states parties. Nonetheless, alternative versions of text proliferated throughout. By the end of 1998 the text contained nearly 3200 pairs of square brackets. This was to be expected and formed part of the negotiating process. We began our work on the rolling text with preliminary elements in a draft format. This has developed in the AHG as proposals were discussed, refined and formulated into a more coherent and structured manner.

Interest from external actors to the AHG increased as time progressed. The European Union “Common Position” was first presented to the AHG in March 1998. The Non-Aligned Movement (NAM) issued a communiqué in May 1998 following their Ministerial meeting in Cartagena de Indias. In the Final Document of the Twelfth Conference of the Non-Aligned Countries held at Durban in August–September 1998 the Heads of State or Government noted the progress achieved so far negotiating a Protocol and stressed the importance of achieving further substantive progress. In September 1998 the High-Level Meeting of Ministers in New York, *inter alia*, noted that: “The Ministers are determined to see this essential negotiation brought to a successful conclusion as soon as possible.” Such political support certainly added to the momentum of the AHG.

The beginning of this year saw the start of 16 weeks of negotiations. As the text continued to develop it was facilitated by the new “Part II” documents of each Friend of the Chair (FOC) seeking to identify possible solutions and

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facilitate the negotiations at each subsequent meeting. Since October 1998 the FOCs have produced in Part II proposals for the various Articles in the Protocol showing how they envisage the Articles developing. Since July 1999 the Part II version has been structured to reflect the Protocol format. In October 1999 there was Part II text for 19 of the 23 Articles, thus providing a consolidated set of new proposals.

Negotiations in the last six months and especially in the September–October session have made considerable progress towards our common goal of a Protocol. Within the rolling text we have seen:

- A reduction in alternative language and the deletion of repetitions across the text, resulting in a more coherent whole for the Protocol;
- A reduction in the number of working papers submitted to the AHG, indicating that the necessary elements are already within the rolling text;
- New language to address previously contentious issues, such as the “NAM and Other States” paper on “Visits”.

Informal consultations are also becoming a more utilised forum by delegations, including bilateral, in respective groups of states, and those facilitated by myself. For example, during the September–October session, a total of 97 formal and informal meetings took place. Outside the AHG, other international organizations have begun to take an interest in how the identification and implementation of cooperative programmes might facilitate the achievement of such common goals as fighting emerging and reemerging infectious diseases.

Within the rolling text we have seen a marked improvement in the status of certain key Articles. Definitions and Criteria in Article II have been streamlined and cross-referenced and addressed *vis-à-vis* their role in the declaration formats, declaration triggers, visits and investigations. The issue of “visits” as part of the procedures for follow up after declarations is becoming more coherent. The investigation elements of the Protocol are progressing at a good pace. Finally, specific measures for the enhancement of Article X of the Convention have been identified and brought together in a more coherent whole in Article VII of the Protocol.

This does not imply that few problems remain. Many issues still have to be addressed by the AHG. Some examples might include:

- The issue of the definition of basic terms in Article II and the impact so-called “objective criteria” might have on the General Purpose Criterion of the Convention;
- In respect of compliance measures there are still differences over the scope of declarations and visits;
- With regard to the investigation procedures, their nature and the underlying decision-making process (red light or green light) has yet to be resolved;
- In Article VII the question of transfer control arrangements and the relationship between the obligations of Articles III and X of the Convention have yet to be addressed.

Some of these issues are more fundamental than others. In previous sessions, these more contentious issues have been rapidly passed over. Yet now, particularly in the last couple of sessions, the AHG has begun a process of constructive engagement in these areas. All the elements necessary for completing the work of the AHG are in place and at this juncture what lies before the AHG are the key and most difficult topics. For many states parties these issues are of fundamental importance. However, whereas in previous sessions these issues might have been dealt with in a politically loaded atmosphere, the tenor of many discussions is now marked by the question, “how will this be implemented in practice?”

I have said that I believe the work of the AHG has moved through three stages and it is now my belief that the last session marked the end of the third phase. As one participant in the negotiations defined it: we are witnessing “the end of the beginning of the endgame”. When we assess what has been achieved and examine all the elements together, what we see is a convergence of factors pointing to the next phase of the negotiations: the move to the end game. The question, therefore, is whether the last session in 1999 and the early sessions in 2000 initiate the “endgame”?

The states parties of the BWC at the Fourth Review Conference called for the completion of the work of the AHG “as soon as possible before the commencement of the Fifth Review Conference” and to submit its report to a Special Conference. At the Fourth Review Conference it was agreed that the Fifth Review Conference shall be held “not later than 2001”, thus continuing the tradition of five-yearly review conferences. Assuming that states parties follow existing practice, the Preparatory Committee for the Fifth Review Conference should take place in the Spring of 2001. The steps that need to precede the Prepcom are the completion of the work of the AHG, the Special Conference of States Parties to adopt the work of the AHG, and the Signature Conference. Each of these steps would need a sufficient lead-time, of weeks if not months, to precede the work of the Preparatory Committee, thus providing the clarity needed not just on the final shape of the Protocol, but on those states that have signed up, before the review conference starts its work.

If the AHG moves into the final stage of its negotiations in 2000, there is no need to dwell unnecessarily on issues simply because the time is available. We might need all the time available but all states parties agree that the completion of the work of the AHG and the Protocol to the BWC are important objectives for the international community. Thus, collectively, we should move forward as quickly as possible, but not losing from sight the importance of producing a legal product of high quality.

We have managed to significantly diminish the number of brackets, especially as a result of the September–October session. Their number has fallen from 3200 to 2000. Proportionately, we now have 30 per cent fewer brackets in the Protocol rolling text than the draft Comprehensive Test Ban Treaty (CTBT) contained in April 1996, four months prior to the conclusion of the negotiations. We have begun to address the most difficult issues. In the September–October session, for the first time in the history of the negotiations, a massive removal of brackets in areas

of prime importance and high complexity did take place. Complex technical aspects still need to be refined, but the majority of the decisions facing the AHG are political in nature and thus require the most serious engagement of all parties in an active manner.

It is with some anticipation that I note that the year 2000 marks both the seventy-fifth anniversary of the 1925 Geneva Protocol and the twenty-fifth anniversary of the entry into force of the BWC in 1975. It is up to the states parties to mark both of them with achievements

commensurate with the moral and political legacy these anniversaries set for the contemporary world of global security and multilateral arms control. The opportunity to complete our work in accordance with our mandate is before us and I am sure we can and will achieve that goal.

This article is based on the statement made to the United Nations General Assembly First Committee by Ambassador Tóth on 22 October 1999.

National Security and Corporate Fairness under the Biological Weapons Convention Act signed into US public law on 29 November 1999

DEFINITIONS.

In this chapter:

(1) Biological weapons convention: The term 'Biological Weapons Convention' means the 1972 Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction.

(2) Compliance protocol: The term 'compliance protocol' means that segment of a bilateral or multilateral agreement that enables investigation of questions of compliance entailing written data or visits to facilities to monitor compliance.

(3) Industry: The term 'industry' means any corporate or private sector entity engaged in the research, development, production, import, and export of peaceful pharmaceuticals and bio-technological and related products.

FINDINGS.

Congress makes the following findings:

(1) The threat of biological weapons and their proliferation is one of the greatest national security threats facing the United States.

(2) The threat of biological weapons and materials represents a serious and increasing danger to people around the world.

(3) Biological weapons are relatively inexpensive to produce, can be made with readily available expertise and equipment, do not require much space to make and can therefore be readily concealed, do not require unusual raw materials or materials not readily available for legitimate purposes, do not require the maintenance of stockpiles, or can be delivered with low-technology mechanisms, and can effect widespread casualties even in small quantities.

(4) Unlike other weapons of mass destruction, biological materials capable of use as weapons can occur naturally in the environment and are also used for medicinal or other beneficial purposes.

(5) Biological weapons are morally reprehensible, prompting the United States Government to halt its offensive biological weapons program in 1969, subsequently destroy its entire biological weapons arsenal, and maintain henceforth only a robust defensive capacity.

(6) The Senate gave its advice and consent to ratification of the Biological Weapons Convention in 1974.

(7) The Director of the Arms Control and Disarmament Agency explained, at the time of the Senate's consideration of the Biological Weapons Convention, that the treaty contained no verification provisions because verification would be 'difficult'.

(8) A compliance protocol has now been proposed to strengthen the 1972 Biological Weapons Convention.

(9) The resources needed to produce, stockpile, and store biological weapons are the same as those used in peaceful industry facilities to discover, develop, and produce medicines.

(10) The raw materials of biological agents are difficult to use as an indicator of an offensive military program because the same materials occur in nature or can be used to produce a wide variety of products.

(11) Some biological products are genetically manipulated to develop new commercial products, optimizing production and ensuring the integrity of the product, making it difficult to distinguish between legitimate commercial activities and offensive military activities.

(12) Only a small culture of a biological agent and some growth medium are needed to produce a large amount of biological agents with the potential for offensive purposes.

(13) The United States pharmaceutical and biotechnology industries are a national asset and resource that contribute to the health and well-being of the American public as well as citizens around the world.

(14) One bacterium strain can represent a large proportion of a company's investment in a pharmaceutical product and thus its potential loss during an arms control monitoring activity could conceivably be worth billions of dollars.

(15) Biological products contain proprietary genetic information.

(16) The proposed compliance regime for the Biological Weapons Convention entails new data reporting and investigation requirements for industry.

(17) A compliance regime which contributes to the control of biological weapons and materials must have a

reasonable chance of success in reducing the risk of production, stockpiling, or use of biological weapons while protecting the reputations, intellectual property, and confidential business information of legitimate companies.

TRIAL INVESTIGATIONS AND TRIAL VISITS.

(a) National Security Trial Investigations and Trial Visits: The President shall conduct a series of national security trial investigations and trial visits, both during and following negotiations to develop a compliance protocol to the Biological Weapons Convention, with the objective of ensuring that the compliance procedures of the protocol are effective and adequately protect the national security of the United States. These trial investigations and trial visits shall be conducted at such sites as United States Government facilities, installations, and national laboratories.

(b) United States Industry Trial Investigations and Trial Visits: The President shall take all appropriate steps to conduct or sponsor a series of United States industry trial investigations and trial visits, both during and following negotiations to develop a compliance protocol to the Biological Weapons Convention, with the objective of ensuring that the compliance procedures of the protocol are effective and adequately protect the national security and the concerns of affected United States industries and research institutions. These trial investigations and trial visits shall be conducted at such sites as academic institutions, vaccine production facilities, and pharmaceutical and biotechnology firms in the United States.

(c) Participation by Defense Department and Other Appropriate Personnel: The Secretary of Defense and, as appropriate, the Director of the Federal Bureau of Investigation shall make available specialized personnel to participate—

(1) in each trial investigation or trial visit conducted pursuant to subsection (a); and

(2) in each trial investigation or trial visit conducted pursuant to subsection (b), except for any investigation or visit in which the host facility requests that such personnel not participate, for the purpose of assessing the information security implications of such investigation or visit. The Secretary of Defense, in coordination with the Director of the Federal Bureau of Investigation, shall add to the report required by subsection (d)(2) a classified annex containing an assessment of the risk to proprietary and classified information posed by any investigation or visit procedures in the compliance protocol.

(d) Study:

(1) In general: The President shall conduct a study on the need for investigations and visits under the compliance protocol to the Biological Weapons Convention, including—

(A) an assessment of risks to national security and United States industry and research institutions of such on-site activities; and

(B) an assessment of the monitoring results that can be expected from such investigations and visits.

(2) Report: Not later than the date on which a compliance protocol to the Biological Weapons Convention is submitted to the Senate for its advice and consent to ratification, the President shall submit to the Committee on Foreign Relations of the Senate a report, in both unclassified and classified form, setting forth—

(A) the findings of the study conducted pursuant to paragraph (1); and

(B) the results of trial investigations and trial visits conducted pursuant to subsections (a) and (b).

This Act forms sections 1121–24 of The State Department FY2000 Authorization Act, which itself forms part of US Public Law 106-113.

Forthcoming events

The eighteenth session of the BWC Ad Hoc Group will be held in Geneva during 17 January–4 February, with subsequent sessions during 13–31 March, 10 July–4 August, 13–24 November and the possibility of a further two-week session interposed between the last two.

The eighteenth session of the OPCW Executive Council will be held in The Hague on 15–18 February, with subsequent sessions during 4–7 April, 27–28 June, 3–6 October, and 5–8 December. The Fifth Session of the OPCW Conference of the States Parties will take place in The Hague during 15–19 May.

ICGEB, jointly with the UN Secretariat will be convening a symposium on *Strengthening the Biological Weapons Convention: International Co-operation and Exchanges in the Field of Biotechnology* in New York on 6 April. Enquiries to Elisabetta Lippolis, e-mail: lippolis@icgeb.trieste.it, fax **39-40 226555.

The fifth international *Chemical and Biological Medical Treatment Symposium (CBMTS III)* will take place in Spiez, Switzerland during 7–12 May. Enquiries to Rudolf Portmann, e-mail: rudolf.portmann@x400.gr.admin.ch, fax **41-33 22 8 1402.

The *CWD2000 International Chemical Demilitarization Conference* will be held in The Hague on 22–24 May.

NBC2000, A Symposium on Nuclear, Biological and Chemical Threats in the 21st Century will take place during 13–15 June at the Helsinki University of Technology. Enquiries about participation to Dr Katri Laihia, e-mail: laihia@cc.jyu.fi, fax: **358-14 602 501.

The *EXPO2000 Second International Symposium on Destruction of Chemical Weapons* will be held in Munster, Germany, during 30 July–3 August. Enquiries to fax: **49-5192 136508, e-mail: volkerstarrock@bwb.org

Strengthening the Biological and Toxin Weapons Convention

A four week meeting, the sixteenth session, of the Ad Hoc Group to consider a legally binding instrument to strengthen the Biological and Toxin Weapons Convention (BWC) was held in Geneva from Monday 13 September to Friday 8 October 1999. As in the previous sessions, negotiations focused on the rolling text of the Protocol.

Fifty-six states parties and two signatory states participated; a net total of one more state party than in June–July as 6 states (Jordan, Guatemala, Libya, Luxembourg, Panama and Venezuela) participated in September–October whilst 5 states (Bangladesh, Iraq, Kenya, Malta and Thailand) which had participated in June–July did not in September–October. A total of 2 fewer signatory states participated in September–October as Nepal participated whilst Egypt, Myanmar and Syria did not.

There was a sharp reduction — from 31 to 11 — in the number of new Working Papers (WP.397 to WP.407) presented in September–October. Three and a half were presented by South Africa, two by Friends of the Chair, two by NAM (Non-Aligned Movement) and other states and the remainder by single states. This reduction is another sign of progress as it indicates that everything needed is *already* in the draft Protocol and there is no requirement to add additional ideas or alternative language.

A new Friend of the Chair, Ambassador Hubert de La Fortelle of France, was appointed to consider General Provisions (Article I of the Protocol) whilst Ambassador Ian Soutar of the UK took over the Friend of the Chair for Compliance Measures from Richard Tauwhare and Antonio de Aguiar Patriota of Brazil took over the Friend of the Chair for Measures related to Article X from Carlos Simas. Another change saw Peter Goosen of South Africa who had previously been Friend of the Chair for the Investigations Annex now becoming Friend of the Chair for Investigations thereby enabling the Friend of the Chair for Compliance Measures to concentrate on Declarations and Declaration Follow-Up Procedures. The move towards more senior representatives — Ambassadors — being the Friend of the Chair is to be welcomed as it emphasises the importance of focusing the negotiations on achieving consensus text.

A revised version of the Protocol was produced and attached to the procedural report of the September–October session (BWC/AD HOC GROUP/47 (Part I), 15 October 1999). This was thus the tenth version of the rolling text — previous versions having been produced in June 1997 (#35), July 1997(#36), October 1997 (#38), February 1998 (#39) and June/July 1998 (#41), September/October 1998 (#43), January 1999 (#44), April 1999 (#45) and July 1999 (#46). This was again shorter (288 pages) than the previous (July) version (with previous versions having totalled 113, 167, 241, 241, 251, 278, 312, 315 and 310 pages

respectively) and there was also significant progress in the removal of square brackets.

As with previous procedural reports, a Part II containing an Annex IV was again produced containing papers prepared by the Friends of the Chair of proposals for further consideration in which the Part I draft Protocol text is modified in a transparent way (~~striking through~~ showing deletions and **bold** proposed new text). As in June–July, the 196 page Part II from the September–October session was structured so that the ~~striking through~~ text reflects the structure of the Protocol with Friend of the Chair proposed language for the Articles, Annexes and Appendices of the Protocol. This therefore provides a ‘vision’ text showing how the Protocol may eventually appear. There is text for 19 of the 23 Articles — only the Preamble and Articles IV, VI, VIII, X are missing — as well as for Annexes A and D and for Appendices C and E. Such a ‘vision’ text is particularly valuable as the pace of the negotiations quicken as it enables delegations to consider both the current rolling text in Part I and the possible developments thereof in Part II. As the Part II text is a transparent development from the Part I text, it can, and is, used by the Friends of the Chair as the basis for discussion in the subsequent Ad Hoc Group session.

Of the 40 meetings held, 13 1/3 were devoted to compliance measures, 8 1/3 to definitions, 6 2/3 to Article X measures, 5 5/6 to the investigations, 1 to preamble, 2/3 to general provisions, 1/3 to confidentiality, 2/3 to organization/ implementation, 1/2 to national implementation and assistance, 2/3 to legal issues, and the remaining time to AHG meetings. It should be appreciated that many of the subjects shown as receiving about one meeting were actually addressed on two or more occasions as two or three of these subjects were frequently addressed in a single meeting. In addition, a number of informal consultations were held to discuss issues prior to their consideration at formal meetings.

The AHG meeting as usual saw the presentation and distribution on 24 September by the Department of Peace Studies at the University of Bradford of a further two Briefing Papers in its series: No 24 *Outbreaks of Disease: Current European Reporting* by Philip van Dalen of TNO, the Netherlands, and No 25 *The Emerging Protocol: An Integrated Reliable and Effective Regime* as well as a further five in its new series of Evaluation Papers No 3 *Articles XVI, XVII, XVIII, XIX and XXIII: Status of the Annexes and Appendices, Signature, Ratification, Accession and Authentic Texts*, No 4 *Article XV: Duration and Withdrawal*, No 5 *Article XX: Entry into Force*, No 6 *Article XXI: Reservations*, and No 7 *Article XXII: Depositary/ies* (available on the Bradford website <http://www.brad.ac.uk/acad/sbtwc>). In addition, two Quaker lunches were again hosted within the Palais des Nations to discuss key issues relating to the overall

effectiveness, reliability and efficiency of the Protocol regime. The Federation of American Scientists (FAS) distributed a further paper entitled "On BWC Protocol Article VII". In addition, presentations entitled "Proposals for Scientific/Technical Cooperation through International Organization" were made on two days from 2 to 3 pm by representatives from the WHO (on 30 September) and from INCLEN (International Clinical Epidemiology Network), Program for Appropriate Technology in Health (PATH) and the International Centre for Genetic Engineering and Biotechnology (ICGEB) (on 1 October). A Pugwash/HSP Workshop entitled "The BWC Protocol: Entering the Endgame" was held during the weekend of 25–26 September 1999 and attended by 51 individuals, in their personal capacity, from 18 states.

Political Developments In the March–April 1999 AHG session, Iran had submitted a Working Paper (WP.361) entitled *Lessons to be learned from the OPCW*. The procedural report of the June–July session reported that the AHG had decided to invite the Director-General of the Organization for the Prohibition of Chemical Weapons (OPCW) to address a formal meeting of the AHG about his assessment of experiences and lessons learned in establishment of the OPCW and in particular those relevant to the AHG's endeavour to conclude an effective Protocol.

Consequently, during the first week of the AHG September/October session, on 16 September, Mr Ron Manley, Special Adviser to the OPCW Director-General made a presentation to the AHG entitled "Establishing the OPCW: Experiences and Lessons Learned". In this he addressed a number of key points:

- the growth in membership of the OPCW;
- problems associated with the short timelines after entry into force written into the CWC for provision of declarations (30 days) and the start of inspections (60 days);
- the current status of declarations and inspections;
- planning for challenge inspections;
- assistance under the CWC;
- international cooperation under the CWC; and
- organization of the OPCW

One of the greatest difficulties encountered by the OPCW was the need to have the Organization in operation 180 days after the deposit of the instrument of ratification by the 65th state. The requirement to do this in 180 days also posed problems for the member states who encountered difficulties in enacting and implementing their own legislation and preparing their declarations. Thus at entry into force, the OPCW had 87 member states but had only received initial declarations from 31 of them. This is a continuing problem as at September 1999, the OPCW had 126 member states but had yet to receive initial declarations from 32 of them.

It is evident that the regime of greatest relevance to the BWC Protocol is undoubtedly that of the CWC and consequently there are important lessons to be learnt from the OPCW experience relating to all aspects of the Protocol. Nevertheless, there are differences and the Protocol regime needs to be, and indeed is being, tailored to reflect and address these differences.

The Emerging Regime

It will be recalled that, in the March 1998 AHG session, the language for Article VII of the Protocol entitled Scientific and Technical Exchange for Peaceful Purposes and Technical Cooperation, which addresses the implementation of Article X of the BWC, had been amended by some members of the Western Group in such a way as to imply that this Article was limited to implementation assistance. This had provoked an immediate negative response by the NAM and other countries as implementation of Article X of the BWC has long been regarded by the developing countries as an important element of the work of the AHG. These changes to Article VII of the Protocol were seen as retrograde steps as there had been a failure to recognise that measures can be devised to both aid the implementation of Article X of the Convention *and* directly contribute to the enhancement of transparency and the building of confidence in compliance with the Convention. Furthermore, such Article X measures can also promote trade and serve as a powerful incentive to encourage states to become parties to the Protocol (and to the Convention). A more positive approach was adopted at the June–July 1998 AHG session when the UK Minister, on behalf of the EU, recognised that "it will be important to ensure that agreement is reached between the divergent positions on this crucial element of the eventual regime." and went on to say that "I feel sure that it will be possible to identify measures that will address real needs." The subsequent sessions of the AHG have seen real progress made in the development of Article VII with the active engagement of all the delegations at the AHG. The Netherlands–New Zealand Working Paper WP.362 in March–April addressed BWC Article X measures and offered several options for consideration and by June–July 1999 there was a real sense that Article VII of the Protocol was successfully moving forward.

This sense of positive engagement now appears to have transferred to other areas of the negotiations which had been making slow progress. There has long been considerable debate about what declarations should be made under the Protocol and what declaration follow-up procedures there should be to ensure that declarations are both complete and accurate. The draft Protocol emerging from the June–July session had a new section, which clearly reflected the experience of the OPCW in respect of CWC declarations, entitled *III. Measures to ensure submission of declarations*. These provisions require the Director-General to report to each session of the Conference of the States Parties on the implementation of the declaration obligations and identify a number of punitive measures that might be applied should a state party not submit its initial or annual declarations within the [6] month period following the relevant deadline.

In the July Rolling Text, the follow-up after submission of declarations included provisions, albeit still in square brackets, for infrequent (less than two per state per year) randomly-selected visits to declared sites and for declaration clarification procedures to address any ambiguity, anomaly, or omission in declarations as well as for voluntary visits to obtain technical advice on the

implementation of declarations obligations or to obtain technical assistance under Article VII. Progress was made earlier in 1999 by the inclusion of provision for the infrequent randomly-selected visits to be extended, if so requested by the state being visited, for up to two days in order to address technical advice and cooperation issues. Declaration clarification procedures would initially involve correspondence with the state party which could where necessary be followed up by consultations with the National Authority within the state. If the matter was still unresolved then a clarification visit might be made. Much debate has focused on whether such clarification procedures should be limited to declared sites or should also apply to sites that should have been declared. It is clear that a much stronger regime will result from clarification procedures applying to both declared facilities and to facilities that should have been declared as this will ensure that all states will be subject to comparable obligations.

An important step forward was made in the September–October session through the submission of a NAM and other States working paper (WP.402) entitled *Proposed Text for Visits* which accepted the idea of a package of declaration follow-up procedures that include infrequent randomly-selected visits, declaration clarification procedures comprising a written request which could be followed up, if necessary, by consultations and then, if the matter was still unresolved, by a voluntary clarification visit, and voluntary assistance visits. It is thus apparent that there is broad consensus among the majority of the negotiators for the concept of a package of declaration follow-up procedures including visits to ensure that declarations are both accurate and complete. However, as always, the detail needs further consideration and discussion as there are a number of points in the NAM proposals that require examination to ensure an effective and efficient regime:

- the NAM text proposes infrequent randomly-selected visits to declared facilities **or** limited to biodefence and BL 4 containment facilities;
- the NAM language for declaration clarification procedures makes it clear that these could only be initiated by the Technical Secretariat in respect of an ambiguity, anomaly or omission of a *purely technical* nature;
- the NAM proposal for voluntary clarification visits needs to be examined in regard to the differences between this and the draft Protocol language in which a State Party can decline a proposed clarification visit should the State Party consider that it has made every reasonable effort to resolve the matter; and
- The NAM visits schedule would have a certain number of each of the three types of visits in a year *but* would require the number of randomly-scheduled visits to be *reduced* to accommodate any invitations for additional voluntary assistance or voluntary clarification visits. There is no safeguard in the NAM working paper to prevent the annual number of randomly-selected visits from being reduced to zero should the number of requests for clarification and voluntary assistance visits be increased.

Although these points have yet to be addressed, it is overall very encouraging to see the concept of a package of visits accepted by the majority of the negotiators.

Detailed Developments The distribution of the meetings in the September–October session shows that most attention was paid to compliance measures, definitions, BWC Article X measures and to investigations with about one meeting apiece to the other subjects.

Compliance Measures The September/October session saw a further development of Article III *Compliance Measures* in a number of areas. In Section *D Declarations I Submission of Declarations* there was a new provision for the Executive Council to periodically review the structure and contents of declaration formats *to ensure the effective implementation and operation of Article III, section D*. Within the main body of *I. Submission of Declarations*, progress was achieved with the removal of three categories of declarations from within square brackets. A further notification requirement, within square brackets, was added [(M) Current Exceeding of Threshold] under which States Parties would be required to notify the Organization should the quantity of any listed agent or toxin which is, or is planned to be, stored at a declared facility is in excess of the threshold quantity. The declaration and notification categories are currently as follows (those removed in September–October from within square brackets are indicated by †):

Initial Declarations

- †(A) Past Offensive and/or defensive [programmes] [activities]
- [(B) National legislation and Regulations]

Annual Declarations

- †(C) Current Defensive [Programmes][Activities]
- (D) Vaccine Production Facilities
- †(E) Maximum Biological Containment (BL-4 - WHO [and OIE] Classification) Facilities
- [(F) High Biological Containment (BL-3 - WHO [and OIE] Classification) Facilities]
- [(G) Work with Listed Agents and/or Toxins]
- [(H) Other Production Facilities]
- [(I) Other Facilities]
- [(J) Transfers]
- [(K) Declarations on the Implementation of Article X of the Convention]
- [(L) Outbreaks of Disease]
- [(M) Current Exceeding of Threshold]

In Section *[II. Follow-up after Submission of Declarations]* the text has been developed to incorporate the language from WP.402. In addition, there has been a cleaning up of the text by the removal of square brackets and the additions of new material. A particular development has been the deletion of the text in *Annex B [Visits]*, which insofar as substance is concerned has been incorporated into Section *[II. Follow-up after Submission of Declarations]* thereby enabling negotiations to concentrate on a single text without prejudging whether at a later stage some detail on procedures for visits might be placed in an Annex. This section on *Follow-up after Submission of Declarations* has

long been one of the most difficult ones and has been slow to reach a stage at which there is broad agreement about the provisions. Nevertheless, although the heading remains in square brackets, the section itself is no longer in overall square brackets and there is now text that has emerged from square brackets. A new paragraph out of square brackets is entitled *Visit schedule* and states that:

5. The total number of all visits conducted pursuant to this Article shall not exceed [30][75] [140] [...] in each calendar year. At the end of each year, the Director-General shall prepare a visits schedule for the following year which shall make initial provision for [the conduct of ... [randomly-selected visits] [transparency visits], ... voluntary assistance visits and ... [[voluntary] clarification visits]] [two-thirds of the total to be allocated to [randomly-selected visits] [transparency visits] and one-third to be allocated to other visits pursuant to this Article]. The Director-General shall submit the schedule containing the details for voluntary assistance visits and [[voluntary] clarification visits] already known, to the Executive Council at its first session of each year.

Whilst the square brackets indicate that there are still divergent views about the terminology for the different types of visits, the *Visit schedule* and the paragraph itself are out of square brackets.

Within the subsections addressing the different types of visits, the internal language has developed with the removal of square brackets even if the overall section is still within brackets. Section (B) *Declaration Clarification Procedures* has itself emerged from within square brackets. Likewise (C) *Voluntary Assistance Visits* continues outside of square brackets and the purpose of such visits has been simplified to:

- [(a) To obtain relevant technical assistance and information;]
- (b) [To obtain technical assistance and information on the subjects specified in Article VII, paragraphs ..., and, as appropriate,] [to implement the technical cooperation and assistance programmes of the Organization];
- (c) To obtain from the Technical Secretariat technical advice or information on the implementation of the declaration obligations of this Protocol with respect to specific facilities.

Two previous purposes for such voluntary visits have been deleted:

- (c) To resolve an ambiguity, uncertainty, anomaly or omission ... concerning the declaration (s)
- (d) To resolve a specific concern, as provided for in ... section E of this Article on consultation, clarification and cooperation.

These deletions reflect the perception that an ambiguity, uncertainty, anomaly or omission in a declaration should be addressed either through the *Declaration Clarification Procedures* or through section E *Consultation, Clarification and Cooperation*.

The current language relating to declaration clarification procedures is considerably convoluted in respect of *any facility which is believed to meet the criteria for declaration and that facility has not been declared*. Another convoluted area is in new text relating the circumstances under which the Executive Council may review the declaration clarification issue. In this text, there is bracketed language that if the requested state party declines to offer a clarification visit the Executive Council may decide:

- (g) By a [two-thirds][simple] majority of all its members, to initiate a clarification visit.

In other words, a “green” light process in which there is no presumption that the clarification visit will take place — a weaker regime than one with a red light process. In further developments, the duration of a clarification visit will now not exceed two days — the previous provision for an extension of up to 48 hours should this be agreed between the visiting team and the visited state party having been deleted.

This tightening up of the declaration clarification visit provisions reflects the generally much tighter specification of the provisions relating to many aspects of the BWC Protocol than in the comparable CWC regime provisions. This is illustrated in the table below.

However, despite these outstanding issues in the overall area of visits, it is noteworthy that the Protocol text following the September–October session saw a reduction by half in the number of square brackets in the text on visits.

Comparison of limitations on duration and team size for visits under the draft BWC Protocol and routine inspections under the CWC					
Draft BWC Protocol regime			CWC regime		
	Duration	Team size		Duration	Team size
Randomly-selected visit	2 days†	4 max	Schedule 1 chemicals	Not limited	Not limited
Clarification visit	2 days	4 max	Schedule 2 chemicals	96 hours	Not limited
Voluntary assistance visit	As agreed	As agreed	Schedule 3 chemicals	24 hours	Not limited
			Discrete organic chemicals (DOCs)	24 hours	Not limited
† Extension can be agreed between the inspection team and the inspected state party.			Extensions can be agreed between the inspection team and the inspected state party.		

Consultation, Clarification and Cooperation Section E has been developed by the addition of further language, which has yet to be discussed by the Ad Hoc Group, relating primarily to a facility that is believed to meet the criteria for declaration yet has not been declared.

Investigations The language in Article III section *G Investigations* had been further streamlined with further square brackets being removed. The two principal types of investigation — “field investigations” and “facility investigations” are both out of square brackets; investigations of concerns that transfers have taken place in violation of Article III of the Convention remain in square brackets. In regard to field investigations, the language, now out of square brackets, provides that:

If a State Party has a concern that an outbreak of disease is directly related to activities prohibited by the Convention, it shall have the right to request a [field] investigation to address the non-compliance concern. In accordance with the requirements of [Annex D, section II, paragraphs 1 and 2], such request shall contain detailed evidence, and other information, and analysis *substantiating* why, in its view, it considers the outbreak of disease *not to be naturally occurring* and directly related to activities prohibited by the Convention. [Emphasis added].

Definitions Although the basic divergence of view continues between those who oppose any attempt to define terms such as “biological and toxin weapons” which might well result in an unwanted reinterpretation of the basic Convention and those who recognise the need to define terms such as “vaccine” and “perimeter” that are necessary for an effective Protocol with uniform obligations on all states parties, there has been some progress in respect of both *Article II Definitions* and *Annex A Declarations I Lists and Criteria (Agents and Toxins)* and *II List of Equipment*. There has been streamlining of the text relating to those definitions needed for an effective Protocol. The lists and criteria in Annex A have also been developed with new simplified consolidated paragraphs, which although still with numerous square brackets, replaces the previous *separate* lists of criteria for human, animal and plant pathogens.

[1. The list of agents and toxins [following below] is for use with [specific measures in particular] [Article III, section D, subsection I, paragraphs 10 and 15] [and section F]. [In this context the following criteria were used as a basis to establish the list of agents and toxins during the discussions of the Ad Hoc Group:

- Agents or toxins known to have been developed, produced or used as weapons;
- Agents or toxins which have severe public health and/or socio-economic effects;
- High morbidity, incapacity and/or mortality rates;
- Low infective/toxic dose;
- High level of transmissibility and/or contagiousness;
- Low effective or cost-effective prophylaxis, protection or treatment available;
- Ease of production and/or dissemination;
- Stability in the environment;
- Short incubation period and/or difficult to diagnose/identify at an early stage.]

[2. The Executive Council may review the list of agents and toxins to ensure it remains effective and operational. Any State Party may propose modifications to the list. The Executive Council shall review such proposed modifications to the list of agents and toxins. Any changes to the list shall be made in accordance with Article XIV.]

[3. In reviewing the list of agents and toxins the Executive Council shall consider, inter alia, [the above mentioned criteria as well as] the following [factors]:

[(a) The potential of individual agents and toxins for use as weapons, for example, whether they are known to have been developed, produced, stockpiled or used as weapons; would have severe adverse socio-economic and/or public health effects; are difficult to diagnose and identify; have short incubation and high morbidity, incapacity and/or mortality rates; have a lack or limited availability of effective and economical prophylaxis and/or treatment; have a low infective or toxic dose; are easily produced and/or disseminated; are stable in the environment; and/or are highly contagious or easily transmissible;]

(b) Scientific and technological developments that may affect the potential of individual agents or toxins for use as weapons;

(c) Effects of potential inclusion or exclusion of an agent or toxin in the list on [peaceful] scientific and technical research and development.]

Insofar as the lists of agents themselves are concerned, there continue to be amendments with the removal of [*Chlamydia psittaci*] from the list of bacterial human pathogens, of [*Modeccin*] from the list of toxins, and [*Camel pox virus*] from the list of animal pathogens. In addition, a number of toxins — *Abrin*, *Anatoxin A*, *Bungarotoxins* and *Ciguatoxin* have emerged from square brackets, whilst one plant pathogen — *Tilletia indica* — has reverted into square brackets. The text for the List of Equipment has also been developed with some streamlining although many items of equipment remain in square brackets.

BWC Article X Measures There was further development in Article VII with both streamlining of the text and removal of square brackets. Section (A) *General Provisions* is now largely out of square brackets with none of the paragraphs now being within overall square brackets and the number of remaining square brackets within this section reduced from 16 to 10. Section (B) *Measures to Promote Scientific and Technical Exchanges* has two of its three paragraphs out of overall square brackets and a significant reduction in the remaining square brackets.

Section (C) *Measures to Avoid Hampering the Economic and Technological Development of States Parties* addressing regulatory aspects has also developed although understandably to a lesser extent than the other Sections. A positive step forward came with the circulation of a non-paper which outlined some ideas regarding measures to avoid hampering the economic and technological development of states parties under which states parties would review any national regulations governing exchanges and transfers of biological agents and toxins, scientific knowledge, equipment and materials to ensure their consistency with the provisions of the

Convention and the Protocol. In addition, the Director-General would collate on an annual basis a report on the implementation of this national review by states parties which would then be considered by the Conference of the States Parties. This non-paper appeared to receive a favourable response indicating that progress can be made in this potentially contentious area. Insofar as the language in Section (C) is concerned two of the three paragraphs are out of overall square brackets and one provision for States Parties to review any national regulations is emerging from square brackets and currently reads that:

Each State Party shall:

...

(c) Undertake to review [periodically] [, and amend or adopt as necessary,] any existing national regulations governing exchanges and transfers of bacteriological (biological) agents and toxins, and equipment, materials and scientific and technological information for the use of such agents and toxins in order to ensure their consistency with the objectives of [the Convention] [Articles III and X of the Convention and the provisions of this Article [and Article III, section F]] [, within ... days of the entry into force of this Protocol for it. The Director-General shall collate on an

annual basis and, for the information of States Parties, report on the implementation of this subparagraph].]

Section (D) *Institutional Mechanisms for International Cooperation and Protocol Implementation Assistance [and Review]* has also developed with the addition of new material. Section (D) now has subsections on The Cooperation Committee, Role of the Technical Secretariat, and Cooperation and Assistance in the Context of Visits. Several paragraphs have emerged from square paragraphs. Section (E) *Cooperative Relationships with other International Organizations and among States Parties* now has an essentially clean opening paragraph which states that:

22. The Organization may, where appropriate, conclude agreements and arrangements pursuant to paragraphs 22 (j), 32 (k) and 36 (h) of Article IX with relevant international organizations and agencies, including, but not limited to the FAO, ICGEB, IVI, OIE, OPCW, UNEP, UNIDO, WHO [, and non-governmental organizations,] [taking into account their relevant competences and existing agreements,] [to enhance compliance and ensure effective and full implementation of Article X of the Convention and this

The maturing BWC Protocol

Article] [in order to] [These agreements may have the following objectives]:

Interestingly, this language, for the first time includes, albeit in square brackets, reference to non-governmental organizations. Section (F) *Safeguards* remains within overall square brackets although a new paragraph has been added to require the taking into account of existing agreements and competences of other relevant international organizations and agencies in order to avoid duplication as well as ensuring effective and coordinated use of resources. The final section of Article VII, section (G) *Report [Submission of Declarations]* and the related *Appendix E Information to be Provided [in the Declaration of Implementation of Article X of the Convention and Article VII of the Protocol]* [under Section G of Article VII] is still heavily square-bracketed reflecting the divergence of views between those who favour the submission by states parties of summary reports and those who favour submission of declarations. This argument appears to be based on concerns that a declaration requirement might result in either the initiation of declaration clarification procedures or, if the declaration was not submitted, the implementation of the measures to ensure the submission of declarations. On the other hand, a reporting requirement could be regarded as being comparable to the existing obligations under the 1986 and the 1991 confidence-building measures and result in patchy and variable submissions. However, given the importance of the Article VII measures to the overall Protocol, a possible way forward would be to devise a declaration obligation along the lines of the current requirement in Appendix E in which the obligation is on states parties to provide a number of general descriptions — and is thus not unduly onerous a declaration obligation — as follows:

1. A general description of [the] [any] measures taken to facilitate the fullest possible exchange of equipment, materials and scientific and technological information for the use of the bacteriological (biological) agents, toxins for peaceful purposes.
2. A general description of [the] [any] measures taken to the further development and application of scientific discoveries in the field of bacteriology (biology) for the prevention of disease or for other peaceful purposes.
- [3. A general description of [the status of] [any specific measures on] the implementation of Article X of the Convention.]
4. [A general description of] [any] [specific] measures undertaken to review the existing national trade legislation or regulations, to promote transfers of bacteriological (biological) materials, equipment and technology for peaceful purposes.]

Organization Although less than a meeting was spent on Article IX *The Organization*, the number of square brackets was significantly reduced from over 200 to under 100. A number throughout the Protocol were removed through agreement of the term “Technical Secretariat” which replaced the previous “Technical [Secretariat][Body]”. An important paragraph concerning the relationship of the future Organization with other international organizations emerged completely from square brackets:

6. The Organization, as an independent body, shall seek to utilize existing expertise and facilities, as appropriate, and to maximize cost efficiencies, through cooperative arrangements with other international organizations as referred to in Article VII, section E, including, but not limited to, FAO, ICGEB, IVI, OIE, OPCW, UNEP, UNIDO, WHO. Such arrangements, excluding those of a minor and normal commercial and contractual nature, shall be set out in agreements to be submitted to the Conference of the States Parties for approval.

The heading for Section (D) *The Technical Secretariat* saw the deletion of previous language [(including *International Epidemiological Network*)] which now appears, in square brackets, within two of the square bracketed sub-paragraphs addressing the functions of the Technical Secretariat. The principal remaining issues within Article IX relate to the composition of the Executive Council and whether Asia should be a single grouping or divided into “East Asia and the Pacific” and “West and South Asia” and to the procedure for the initiation of investigations (“red” light or “green” light).

National Implementation Measures Article X also developed with a reduction by half in the number of square brackets from 14 to 7. The text is now largely clean although the requirement to enact penal legislation is still within square brackets with the language now stating that:

1. In addition to its obligations under the Convention, including Article IV, each State Party shall, in accordance with its constitutional processes, take any measures required to implement its obligations under this Protocol. In particular, it shall where appropriate and necessary:
 - (a) Prohibit natural and legal persons anywhere on its territory or in any other place under its jurisdiction as recognized by international law from undertaking any activity prohibited to a State Party under the Convention [and Article I of this Protocol], including enacting penal legislation with respect to such activity];

Prospects

The September–October session also saw the agreement of the programme of work for the three-week seventeenth session to be held from 22 November to 10 December. The 30 meetings were allocated as follows:

Compliance measures	7
Investigations annex	5
Article X	4
Definitions	4
Ad Hoc Group	10
<hr/>	
Total	30

The unusually large allocation of time to the Ad Hoc Group meetings reflected the necessity, because of the proximity of the seasonal break, to complete the L. series reports on the outcome of the negotiations sufficiently far in advance of the end of the session to enable translation into the official languages and to thus make copies available for delegations by the last day of the session.

Overall, the September–October session saw solid progress with the removal of over 700 square brackets, continuing the downward trend towards a text essentially free from square brackets. Representing the maturing of the Protocol graphically (see facing page), more and more Articles are arriving at the right hand side of the figure with either no, or only a very few, remaining square brackets. Over half of the Articles in the Protocol are now essentially complete.

It is becoming ever more apparent that the completion of the Protocol within 2000 is entirely achievable given the political will. This continued political will is evident in a NATO Parliamentary Assembly resolution adopted in Amsterdam on 15 November in which the Assembly:

urges member governments and parliaments of the North Atlantic Alliance:

a. to conclude the negotiations on a legally binding protocol to strengthen the BWC within the coming year; ...

A further manifestation came with a Finnish declaration, on behalf of the European Union and the Central and Eastern European countries associated with the European Union, on the opening day of the November–December Ad Hoc Group. This declaration stated that “the European Union

continues to believe that ... urgent completion of all stages of the negotiations is imperative so as to ensure the adoption of the Protocol by a Special Conference in 2000. The pace of negotiations this year indicates that this goal is attainable. But we must maintain the continuity and momentum we have all worked hard to achieve in 1999, and allocate appropriate time for negotiations in the first half of the year 2000.” The declaration also states that “The elements essential for an effective Protocol are already well-developed in the text in front of us.”

The September–October session thus saw real progress with the closing of the divergence of views on the concept of a package of visits to ensure that declarations are complete and accurate. The preliminary soundings on possible language to address national regulations governing exchanges and transfers augur well for the future. The Protocol negotiations can, given the necessary political will, indeed be completed during 2000 — and achieve an effective Protocol.

This review was written by Graham S Pearson, HSP Advisory Board

Progress in The Hague

Quarterly Review no 28

Developments in the Organization for the Prohibition of Chemical Weapons

The period under review, from mid-September to early December, saw two regular sessions of the Executive Council. Attention also focused on improving the operational capabilities of the OPCW with a challenge inspection exercise being held in Brazil and an investigation of alleged use exercise in the Czech Republic. During the period under review the first change to the text of the Convention came into effect. On 31 October a new paragraph was added to Part VI of the Verification Annex using the simplified amendment procedure for technical and administrative changes to the annexes. The change details the revised notification procedure for transfers of the Schedule 1 chemical saxitoxin. The United Nations Secretary-General, as depositary, has updated the text of the Convention and the new version will be made available by the OPCW.

Two new states, Nicaragua and Liechtenstein, joined the Convention during the period under review. Activities aimed at increasing the universality of membership continued on all levels. The Director-General travelled to the fifty-fourth session of the United Nations General Assembly to meet with representatives of signatory and non-signatory states and also wrote to many of their foreign ministers. The Secretariat also arranged a regional seminar in Kenya to encourage ratifications from Africa where only 31 out of 51 states are parties to the Convention. A delegation from the Secretariat travelled to Kazakhstan to

provide technical assistance in advance of their becoming a state party. Another technical visit was made to Chad for the same purpose. Discussions were also held between the Secretariat and officials in Belgrade on Yugoslavia's possible accession to the Convention.

Much attention during the period under review has been focused on the destruction of chemical weapons and the destruction or conversion of Chemical Weapons Production Facilities (CWPFs). Russia requested an extension to its deadline to destroy one per cent of its Category 1 chemical weapons by 29 April 2000 due primarily to the adverse economic climate in Russia. The request was viewed with concern by some states parties although Russia also submitted more detailed information on its programme for the destruction or conversion of its 24 CWPFs. The Council has also been examining the destruction plans of the three other declared chemical weapons possessors. The USA has still not submitted its Article VI declaration which is continuing to cause difficulties for the Secretariat with regard to the planning of chemical industry inspections in 2000.

Executive Council

During the period under review, the Executive Council met for two regular sessions, its sixteenth and seventeenth, during 21–24 September and 30 November–3 December

respectively. Prior to each session the Council held an informal one-day meeting on the progress of destruction of chemical weapons and the destruction or conversion of CWPFs. A large number of informal consultations were convened under the new procedure adopted by the last session of the Conference for addressing unresolved issues.

At its seventeenth session the Council decided that it will meet for five formal sessions in 2000, on the following dates: 15–18 February; 4–7 April; 27–28 June (organizational issues); 3–6 October; and 5–8 December. Additional formal and informal meetings and consultations will continue to be held as necessary.

Status of implementation of the Convention The Director-General reported to both formal sessions of the Council on the status of implementation of the Convention. As has been the practice since the beginning of this year, Part I of the *Status of Implementation Report* (SIR) submitted to the Council's sixteenth session was issued as a Highly Protected document. Part II of the SIR deals with the implementation of Articles X and XI of the Convention and is issued as an unclassified document.

Destruction of chemical weapons The Director-General reported on a number of events related to the destruction of chemical weapons in states parties. The USA had submitted its detailed annual plan for destruction of chemical weapons in 2000 and had also submitted notifications of the completion of destruction operations of the M687 155mm binary munitions at Hawthorne and of HD filled munitions at Johnston Atoll. India submitted an annual report on the destruction of Category 3 chemical weapons while another state party submitted a detailed annual plan for chemical weapons destruction in 2000 specifying the schedules for Categories 1 and 3 chemical weapons destruction operations.

Russia submitted to the Council's seventeenth session a request that it be granted an extension to the intermediate deadline for the destruction of Category 1 chemical weapons. According to the Convention states parties are required to destroy one per cent of their Category 1 stockpile by 29 April 2000, three years after the entry into force of the Convention. The Russian request admitted that the construction of Chemical Weapons Destruction Facilities (CWDFs) is proceeding more slowly than expected because of the difficult economic situation facing the country. However, it also stated that the CWDF in Gornyy should be in a position to start the destruction of chemical weapons at the end of 2000 and that work is continuing at the six other CWDF sites in Russia. Russia reiterated its commitment to meeting the phase 2 intermediate deadline (20 per cent of Category 1 munitions by 29 April 2002) and its adherence to the obligation to destroy all chemical weapons stockpiles not later than 29 April 2007. At the Council's seventeenth session many states parties expressed their concern at the situation but indicated their willingness to consider the request constructively. A final decision was deferred until the eighteenth session, pending the provision of more information by Russia.

Combined plans for destruction and verification of CWPFs The Director-General reported to the Council that the USA had submitted to the Secretariat its annual plan for the destruction of CWPFs in 2000. The facilities involved are at Newport Chemical Depot, Aberdeen Proving Ground and Rocky Mountain Arsenal. The Council's seventeenth session considered and adopted the combined plans for destruction and verification of a CWPF in India.

The Director-General submitted a note to the Council's sixteenth session outlining the approach which the Secretariat intends taking when issuing certificates of destruction or completion of conversion for CWPFs. In a number of cases states parties have been unable to provide documentation relating to the destruction or disposal of equipment at such facilities prior to the entry into force of the Convention. Although there is no legal obligation on states parties to retain such documentation the Secretariat had argued that in the interests of building confidence it was appropriate to request states parties to provide any available documentation. After carrying out a review of all the declared CWPFs the Director-General reported to the Council that the Secretariat would proceed with the issuance of certificates of destruction or completion of conversion where the only outstanding issue is the absence of documentation on the destruction or disposal of equipment prior to entry into force. In such situations the Secretariat will issue certificates when the inspected state party has demonstrated that it has attempted to locate documentation and when it is clear that further efforts are unlikely to yield results.

The Director-General reported to the Council's seventeenth session that the Secretariat had recently issued destruction certificates for six CWPFs in four states parties (two in France, one in the UK, two in the USA and one in an unidentified state party). This brings the total of CWPFs certified as destroyed to 20 in seven states parties.

Requests for conversion of CWPFs Three requests for the conversion of CWPFs to purposes not prohibited by the Convention were submitted by Russia to the Council's sixteenth session. Two of the facilities in question were in Chapayevsk and the third was in Berezniki. However, these requests were deferred to give the Council more time for consideration. They were considered again by the Council's seventeenth session and were adopted and forwarded for approval by the fifth session of the Conference. Two further conversion requests from Russia for CWPFs at Volgograd have been submitted to the Secretariat and will be introduced to the Council in due course. A detailed article by Russian officials on their destruction and conversion programmes for CWPFs was included in the November-December issue of the *OPCW Synthesis*.

The Director-General reported that the first two certificates for the completion of conversion of CWPFs were provided to the UK and the USA, presumably for the facilities at Nancekuke and Van Nuys which were approved for conversion by the second session of the Conference in 1997.

Facility agreements The Council's sixteenth session returned to its consideration of the five Schedule 2 facility agreements submitted to its fifth meeting by Switzerland. However, the continuing lack of consensus on the frequency of inspections at Schedule 2 plant sites caused the agreements to be deferred once again. The frequency of inspections in the agreements was based on that proposed by the Secretariat and at least one delegation stated that this did not reflect its views. However, at its seventeenth session the Council finally adopted the five agreements, for plant sites at Pratteln, Monthey, Visp, Basel, and Zofingen. Consideration of an agreement for a Schedule 1 protective purposes facility in Switzerland was also deferred by the Council's sixteenth session but the agreement was adopted by the seventeenth session. The Council's sixteenth session adopted six facility agreements with India; for a Schedule 1 facility, three CWPFs and two Chemical Weapons Storage Facilities (CWSFs) at unspecified locations. The Council's sixteenth session also considered two facility agreements for the CWPFs in Russia approved for conversion by the fourth session of the Conference. While the agreement for the CWPF at Novocheboksarsk was approved, consideration of the agreement for the CWPF at Volgograd was deferred but it was later approved by the Council's seventeenth session.

Industry verification issues The coordinator of the cluster of unresolved and pending issues related to the chemical industry, Ambassador Edwin Delofski (Australia), convened an intensive series of consultations during the period under review reflecting the importance of the resolution of as many of these issues as quickly as possible.

Since being requested to do so by the second session of the Conference the Council has been addressing the criteria used by states parties for making Schedule 2 and 3 plant site declarations and for reporting aggregate national data (AND) on Schedule 2 and 3 chemicals. The Council's thirteenth session requested the Director-General to ask states parties for more information and to report back to the fifteenth session. As information was still being collected, the Director-General delayed submitting the report until the sixteenth session. Similarly to past reports, it noted a general lack of consistency in the criteria used. Differences in low concentration limits appeared to matter less than the inherent characteristics of the chemical industries of the respective states parties. Approaches to the declaration of AND also varied, which was observable in the inconsistencies in the reporting of import/export data. The report focused on the low concentration limits for Schedule 2 and 3 plant sites, the issue of "captive use" at such sites and on the declaration of AND for Schedule 2 and 3 chemicals. The sixteenth session did not discuss the report but it was considered during the intersessional consultations. The Council's seventeenth session considered a draft decision on the guidelines regarding low concentrations but decided to consider it further during the intersessional period and return to it at its next session.

As reported in CBWCB 44, the Council's fifteenth session had considered the inspection of facility records during initial Schedule 2 inspections. The Council's fifth

meeting requested the Secretariat to issue a revised paper taking into account the views expressed during the fifteenth session and to broaden the scope of the paper to also cover Schedule 3 and DOC (discrete organic chemicals) inspections. The revised paper was submitted to the sixteenth session and considered in detail during the intersessional consultations. The Secretariat's position with respect to the inspection of facility records at Schedule 2 plant sites remained as described previously (see CBWCB 44). Based on discussions during the intersessional period the Council's seventeenth session considered a draft decision but decided to return to it at its next session. Differences of interpretation also appear to exist between the Secretariat and at least one state party with respect to the inspection of records at Schedule 3 plant sites. Considering that the provisions are identical for DOC plant sites as for Schedule 3 inspections, similar problems could arise when DOC inspections begin in 2000. Whereas Part VII of the Verification Annex clearly states that during inspections at Schedule 2 plant sites "access to records shall be provided", the provision for Schedule 3 plant sites in Part VIII is substantially different: "the inspection team may have access to records in situations in which the inspection team and the inspected State Party agree that such access will assist in achieving the objectives of the inspection". One state party argued that facilities need only to allow access to records relating to the current activities and not to records of past production. However, while recognising the clear distinction between the provisions for access to records at Schedule 2 plant sites and those at Schedule 3 plant sites the Secretariat emphasised that verification needed to be effective and pointed out that some Schedule 3 chemicals had been used as chemical weapons in the past. In this light the Secretariat stated its intention to continue to instruct inspection teams to request access to records of past production, initially for the year prior to the one in which the inspection takes place, unless the Council decides otherwise. A similar approach will be taken when DOC inspections commence in 2000.

The Council renewed its consideration of the Secretariat's methodology for selecting Schedule 3 and DOC plant sites for inspection during the period under review. This issue has been under active consideration since the Secretariat submitted a revised selection method to the fourteenth session. Japan submitted two national papers on this subject to the fifteenth session which were incorporated into another paper by the Secretariat submitted to the sixteenth session. The need to review the current selection method is important for two main reasons. A number of states parties view the resolution of this issue as a precondition for their consideration of methodologies for DOC plant site selection which must be addressed prior to next year's Conference session. In addition it was pointed out that 79 per cent of the total industry inspections in 1998 took place in only 8 states parties and that 101 of the then 121 states parties did not receive any industry inspections. A number of these states parties have petitioned the Secretariat about the possibility of receiving inspections, emphasising the need for the equitable geographic distribution of inspections. Australia and South Korea submitted a joint non-paper to the Council's sixteenth

session which proposed another selection methodology. The Secretariat submitted to the seventeenth session a comparison of all three methodologies; the one currently in use, the Japanese proposal and the Australian/South Korean proposal. In the light of intersessional consultations the Council decided to adopt a new methodology for the selection of Schedule 3 plant sites and decided to review it in the fourth year after its implementation. In accordance with the new methodology the selection of Schedule 3 plant sites will be done using a two-step random selection in which first the state party is selected and then the plant site within the state party.

The frequency of systematic and routine inspections at Schedule 2 plant sites had been on the Council's agenda since its twelfth session. The issue had also been extensively discussed during the negotiations for the 1999 and 2000 budgets. As already noted the lack of agreement on this issue has prevented the Council from approving any Schedule 2 facility agreements. Resolution of the issue is made more complex because some states parties see the frequency of Schedule 2 inspections as being linked with the frequency of Schedule 1 inspections for which the PrepCom could not agree guidelines. States parties have expressed a range of views on this issue with some arguing that the hierarchy implied by the Schedules should be reflected in the intensity of inspections for Schedule 1 and 2 facilities with the former receiving a higher intensity of inspections. Other states parties however, argue that, for example, a Schedule 2 plant site producing 500 tonnes of PFIB per year poses more of a risk to the object and purpose of the Convention than a Schedule 1 laboratory producing one gram of mustard gas per year. In its development of a risk assessment algorithm for Schedule 2 plant sites the Secretariat proposed that sites be split into five categories, from the most to the least risky. The Council's seventeenth session decided to consider the issue further during intersessional consultations and return to it at its next session.

As reported in previous quarterly reviews the 1999 budget set limitations on the number of Schedule 2 inspections which could be conducted during the year. A total of 88 Schedule 2 inspections were planned, but with 50 being reserved for inspections in states parties which had not submitted their initial Article VI declarations before 20 November 1998. These reserved inspections could not be carried out in other states parties. However, the Director-General reported to the Council's sixteenth session that as of 31 August no new Article VI declarations had been submitted and that the Secretariat had conducted 37 of the 38 non-reserved Schedule 2 inspections and 6 of the 7 planned Schedule 3 inspections. The Director-General reported that the remaining two inspections would also soon be carried out. Faced with the possibility of being able to conduct no industry inspections for the remainder of 1999 and the consequent under-utilisation of inspector resources, the Director-General informed the Council of his intention, after consultations with states parties, to carry out up to 20 additional Schedule 3 inspections. These inspections would be confined to states parties which had received less than two Schedule 2 inspections during 1998 and 1999. Five of these states parties had not yet received

any inspections under Article VI. While some delegations expressed certain concerns with the Director-General's proposal, none of them expressed outright opposition and he reported to the seventeenth session that 18 additional Schedule 3 inspections had been planned of which 16 had already been carried out.

The issue of "production by synthesis" on which the Scientific Advisory Board had made recommendations and which the Conference at its last session had referred to the Council was not discussed at either the sixteenth or the seventeenth session. The meeting of experts on this issue called for by the Conference has not yet been convened.

Establishment of working groups In accordance with the decision taken by the fourth session of the Conference on the mechanism for addressing the unresolved issues, the Council's sixteenth session established two working groups. One of these will address the remaining unresolved issues inherited from the PrepCom. The other will address issues which have arisen since entry into force, which are now termed pending issues. Both groups are chaired by the Council's chairman, Ambassador Ignacio Pichardo Pagaza (Mexico). The issues referred to both groups have been organised into four clusters each coordinated by one of the Council's vice-chairs: chemical weapons issues (South Africa); chemical industry and other Article VI issues (Australia); administrative and financial issues (Slovakia); and legal, organisational and other issues (Iran). Many of the facilitators who were working within the Committee of the Whole before the fourth session of the Conference have continued to facilitate the same issues.

Financial issues The Director-General reported to the Council's sixteenth and seventeenth sessions on the status of contributions to the 1999 budget. Of the total 1999 assessments of NLG 108,080,500 the Secretariat had received NLG 90,576,606 (83.8 per cent) as of 31 October. Of the then 126 member states 61 had paid in full, 15 had partially paid and 50 had not paid at all. Members of the Council had failed to set a good precedent in this regard. As of 31 October only 26 of the 41 Council members had paid their contributions in full, six had paid only partially and nine had not paid at all. The collection rates for the 1997 and 1998 budgets stood at 99.4 per cent and 97.5 per cent respectively. In June the surplus of approximately NLG 40 million from the period 1 June–31 December 1997 was credited to all member states which had paid in full their contributions for that period. According to the financial regulations the surplus is credited back to member states to liquidate, in the following order, any outstanding advances to the working capital fund, any arrears of assessed contributions and assessed contributions for the current and the following financial periods.

The Director-General also reported on the status of reimbursements of verification costs by states parties which had made declarations under Articles IV and V. Of a total of NLG 16,458,965 invoiced to the nine relevant states parties (China, France, India, Iran, Japan, Russia, UK, USA and one other), as of 31 October the Secretariat had only received NLG 4,083,903, a shortfall of NLG 12,375,062. Only China, France and the UK had paid all of the amounts

invoiced to them. India, Japan, the USA and another state party had partially paid, while Russia and Iran had paid nothing. For inspections in 1999 states parties had only been invoiced for the first and second quarters of the year. Acknowledging the concern expressed by the fourth session of the Conference about this situation the Director-General proposed that when budgetary surpluses are credited back to states parties they can also be used to liquidate outstanding reimbursement payments, in addition to the arrears listed above. The Council's seventeenth session decided to consider the proposal during intersessional consultations and to return to it at its next session.

The Advisory Body on Administrative and Financial Matters (ABAF) met for its sixth session during 18–19 October. After reviewing the report of its previous session, the ABAF received a status report on the 1999 budget which revealed an underspend of between NLG 10 million and NLG 13 million. The Secretariat informed the ABAF that the 2001 budget would closely follow that of 2000 except it would be denominated in euros rather than guilders. The Council's seventeenth session noted the ABAF's report and the resignations from the ABAF of Mr Marcos Benito Derizans Paiva (Brazil), Mr Peter Döllekes (Germany), Mr Gye Hyun Kwon (South Korea) and Mr Chris Park (USA), who were replaced by Mrs Maria Dulce Silva Barros (Brazil), Mr Rolf Herden (Germany), Mr Chul-Min Park (South Korea) and Mr John Fleming (USA) respectively. The Council also approved the appointment of Mr Amir Shadani (Pakistan) to the ABAF. The ABAF decided to hold its seventh session during 24–29 January.

Staffing issues Upon adopting the staff regulations the fourth session of the Conference delegated to the Council's sixteenth session the authority to decide the effective starting date of the agreed seven-year tenure period. Despite further intensive negotiations following the Conference the Council's sixteenth session was unable to agree upon the starting date and decided to continue consultations under the friend of the chair, Ambassador L'ubomir Kopaj (Slovakia), who was requested to report back when a basis for decision-making had emerged. No decision was taken by the seventeenth session.

As requested by the fourth session of the Conference the Council's sixteenth session considered the terms of reference and scope of a new study on the classification of posts within the Secretariat. The Council decided that the Director-General should choose a team of internationally recognised experts and that the study should follow the relevant International Civil Service Commission (ICSC) procedures. The scope of the study will cover all professional and general service posts within the Secretariat but it will not make any evaluations or recommendations on the "top structure", those posts above and including P-5. The Director-General reported to the Council's seventeenth session that he had approached the ICSC who had recommended two possible experts to undertake the work, which he hoped would begin as soon as practicable in 2000.

Other issues The Director-General submitted to the Council's seventeenth session a proposal on the availability of OPCW official documents on the internet. Currently

national authorities and delegations based outside The Hague have to wait for documents to arrive in the post or they have to establish an electronic link to the Secretariat's Lotus Notes system and pay for an international phone call every time they need a document. The Secretariat therefore proposed to put documents on the OPCW website which most national authorities can access for the price of a local phone call. Under the proposal documents would be organised into three categories:

- Documents available to all visitors to the OPCW website including: Conference documents (except draft papers, national papers which the authors do not want included and other documents at the Director-General's discretion); some Council documents such as agendas, decisions and reports; documents issued by the Scientific Advisory Board; and documents issued by the Secretariat at the Director-General's discretion.
- Documents in a password-protected restricted area of the website which would include: draft Conference papers; Council, Conference and Secretariat documents which are not made publicly available; and documents issued by the ABAF.
- Documents which would not be posted on the website at all including: draft documents from ongoing sessions of the Conference or Council; national papers if the authors so request; other documents as decided by the Director-General; and any documents containing confidential information.

This new policy was already apparent at the Council's seventeenth session when the Director-General's opening statement was posted on the website within hours of it being delivered in the Ieper Room. Some Council members made statements on the need to ensure that documents are only posted on the website in accordance with the Confidentiality Annex, the Policy on Confidentiality and the Media and Public Affairs Policy. The Council also recommended that the Secretariat carefully select the non-classified documents to be made publicly available on the website.

In the light of the prior approval of the fourth session of the Conference, the Council's sixteenth session adopted a privileges and immunities agreement with Greece. This brings the total of adopted agreements to four.

The Director-General had submitted to the Council's fifteenth session a note recommending that the OPCW accede to the 1986 Vienna Convention on the Law of Treaties Between States and International Organizations or Between International Organizations. While the fifteenth session had deferred consideration the sixteenth session recommended that the fifth session of the Conference authorise the Director-General to deposit the OPCW's instrument of accession.

The Council's sixteenth session considered the list of new spectra for inclusion in the Central Analytical Database validated by the fourth meeting of the Validation Group. As no concerns had been communicated by states parties the Council approved the list of new spectra. Following its fifth meeting on 5–6 October the Validation Group forwarded to the Director-General more new spectra for inclusion in the database. This new list will be considered by the Council's eighteenth session in early 2000. The

Validation Group will hold its sixth session on 17–18 January.

The US delegation requested the addition of an item to the agenda of the Council's seventeenth session on the Secretariat's action to ensure Y2K compliance. The Director-General reported that all necessary steps to ensure Y2K compliance were being taken within the Secretariat but that external factors would also come into play. The Secretariat hoped to be able to minimise any Y2K related disruption.

Action by Member States

Ratifications During the period under review two additional states deposited instruments of ratification with the UN Secretary-General in New York. They were: Nicaragua which ratified on 5 November (entry into force on 5 December) and Liechtenstein which ratified on 24 November (entry into force on 24 December). These ratifications bring the total number of states parties to 128 and the number of signatory states to 42.

A number of OPCW member states also undertook activities aimed at increasing the universality of the Convention during the period under review. Canada forwarded to the Director-General a resolution adopted by the 1999 General Assembly of the Organisation of American States (OAS). The resolution reaffirmed the member states' commitment to the Convention and urged the 15 members of the OAS which had not already done so to join the Convention as soon as possible. On 18 November eight south-east European states parties (Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Hungary, Macedonia, Romania and Slovenia) issued a declaration through the Special Coordinator of the Stability Pact calling for Yugoslavia to accede to the Convention as a contribution to regional stability.

Technical Secretariat

Declaration processing As of 17 November the Secretariat had received 94 initial declarations, meaning that 32 states parties have still not fulfilled this fundamental obligation. On 23 November the Secretariat issued a corrigendum to the 1998 annual report which clarified the number of states parties making declarations of CWPFS under Article V as of 31 December 1998. Whereas the original report had listed "China, France, India, Japan, Russia, UK, USA and two others", the corrigendum lists "China, France, India, Iran, Japan, Russia, UK, USA and one other".

The period under review saw the passing of deadlines for the submission of annual declarations of anticipated activities (ADAAs) for scheduled chemicals in 2000. In accordance with the Verification Annex ADAAs for Schedule 1 activities were due on 2 October, while those for Schedule 2 and 3 activities were due on 2 November. As of 17 November 18 states parties had submitted ADAAs for Schedule 1, 21 states parties had submitted Schedule 2 ADAAs and 23 states parties had submitted Schedule 3 ADAAs.

As reported in the previous quarterly review the security audit team was due to conduct a full operational and security audit of the Electronic Document Management System (EDMS) from 24 October. However, on 29 October the team reported that the EDMS was still not ready to be audited. The team concluded that the use of the system should not be expanded until it is ready to be audited and has demonstrated the ability to meet the required security standards. The team also pointed out that key security tasks are divided between a number of divisions and units with little coordination. The Director-General accepted this observation and intends to conduct a review of the allocation of resources in this area and their management.

Inspections As of 6 December, the Secretariat had carried out 620 inspections at 312 sites in 35 states parties. The breakdown of these inspections was as follows: 14 to Abandoned Chemical Weapons sites; 138 to CWDFs; 150 to CWPFS; 91 to CWSFs; 25 to Old Chemical Weapons sites; 54 to Schedule 1 facilities; 110 to Schedule 2 plant sites; 37 to Schedule 3 plant sites; and 1 other. OPCW inspectors had spent a total of 39,079 person-days on mission.

During 1–9 October the OPCW, in cooperation with the Brazilian government, held a challenge inspection exercise. Unlike previous exercises in the UK and the Netherlands this one simulated the entire challenge inspection process from the submission of the request to the preparation of the final report and was conducted at an private industrial site rather than a military facility. The Secretariat is currently finalising its internal review of the lessons learned from the exercises in 1999 and held an internal seminar on 13 December. The results of this review will be submitted to states parties at a seminar on 11 February, organized in cooperation with the UK government. At this seminar, the Secretariat will describe its experiences gained from two challenge inspection exercises and the UK will present a national paper on challenge inspections which it submitted to the Council at its seventeenth session.

Implementation of Article X Very few states parties had yet submitted information on their national programmes related to protection against chemical weapons. As of 6 December only 15 states parties (Albania, Australia, Belarus, Canada, Czech Republic, Denmark, Finland, France, Lithuania, Romania, Spain, Sweden, Switzerland, UK and USA) had submitted such information at least once.

States parties continue to inform the Secretariat of which of the three options for providing assistance under Article X.7 they have chosen. Under Article X.7(a) 24 states parties (Belgium, Canada, Chile, Denmark, Finland, Hungary, Ireland, Italy, Japan, Kenya, Kuwait, Lithuania, Luxembourg, Mauritius, Netherlands, New Zealand, Norway, Oman, Peru, Slovenia, South Korea, Sweden, Switzerland and Turkey) had expressed their intention to contribute to the voluntary fund for assistance. The amount in the voluntary fund stood at NLG 1,253,642 as of 6 December. Four states parties had expressed an interest in agreeing bilateral agreements with the OPCW under Article X.7(b), but only one agreement had been signed, with Iran.

Finally, states parties can elect to make unilateral declarations of the type of assistance which they could provide if requested, under Article X.7(c). As of 6 December, 30 states parties (Australia, Austria, Belarus, Bulgaria, China, Croatia, Cuba, Czech Republic, France, Germany, India, Iran, Lithuania, Monaco, Mongolia, Morocco, Pakistan, Poland, Portugal, Romania, Russia, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, UK and USA) had chosen this option.

As the culmination of the Secretariat's year-long training programme the Czech Republic hosted a combined exercise on the investigation of the alleged use of chemical weapons and delivery of assistance during 17–20 October. The investigation team comprised 23 OPCW inspectors and one national expert, a toxicologist. Observers from ten states parties representing the five regional groups (Cameroon and Sudan; China and South Korea; Poland and Russia; Chile and Mexico; Sweden and UK) also attended the exercise. The exercise focused on field operations and did not test other elements such as the role of the Council, headquarters activities and the preparedness of states parties. The exercise emphasised the importance of human factors such as interviewing techniques and the collection of evidence and also highlighted the need for appropriate equipment.

In addition to the field exercise a number of other states parties had organised training courses as part of their national contributions under Article X. The Swedish government arranged a chemical support training course at Revinge during 8–26 November which was attended by 14 participants. The course provided training in chemical support in the area of civilian protection and preparations for dealing with an attack by terrorists using toxic chemicals. It was particularly directed at member states without an existing civilian chemical weapons protection capability. Participants were also briefed on Swedish capabilities to provide assistance. During 14–19 November the Swiss government hosted the first emergency field laboratory training programme (SEF-LAB I) in Spiez. Similarly to the Swedish course this one was also aimed at providing training in areas which would directly benefit the civilian populations of other states parties. The course focused on basic chemical weapons detection capabilities and in training participants in the use of equipment contained in the Swiss pledge under Article X. The course was attended by 17 participants. Finally, Slovakia hosted an international workshop to promote and coordinate assistance and cooperation under the Convention during 16–19 November. The workshop provided a forum for states parties to share their experiences of the practical implementation of Article X and also allowed the Slovak authorities to demonstrate how their protection system has been built up. The workshop was attended by 37 people representing 29 states parties.

Implementation of Article XI During the period under review the External Relations and International Cooperation and Assistance Divisions were particularly active in arranging support to national authorities. Two national courses were held; in Viet Nam during 22–23

November with the support of the Australian national authority and in Bangladesh during 30 November–2 December. An advanced training course was held in Spain during 19–27 October for national authority personnel from Latin America and the Caribbean and parallel basic and advanced courses were hosted in Romania during 25 October–2 November. Another advanced training course is planned for 17–25 January 2000 in Ypenburg in the Netherlands.

During 8–9 November officials from the Secretariat and the French national authority visited Chad to facilitate preparations for the ratification of the Convention. Presentations focused on the establishment of a national authority and the submission of declarations. During 16–19 November Secretariat staff members visited Kazakhstan in order to assist with the preparation of the country's declaration. Although Kazakhstan is not yet a state party to the Convention its parliament has ratified the Convention and this technical assistance visit is expected to facilitate the deposit of its instrument of ratification in New York in the near future.

The Secretariat and Protechnik Laboratories arranged the first African seminar on analytical issues related to the Convention during 16–18 November in Pretoria. The seminar brought together international scientists and national authority personnel to share information and knowledge regarding the analysis and detection of chemical warfare agents and toxic chemicals and to be informed about the laboratory assistance available from the OPCW.

Sixth official proficiency test The sixth official proficiency test got underway on 1 September with the dispatch of test samples to 25 laboratories in 22 states parties. The test samples were prepared by the Military Institute of Chemistry and Radiometry Laboratory (Poland) and the test reports will be evaluated by the Edgewood Chemical and Biological Forensic Analytical Center (USA). A preliminary evaluation of the test reports was carried out on 25 November and the final evaluation is expected in mid-January. The seventh proficiency test is scheduled to begin on 1 March.

Official visits During 11–20 October the Director-General and other senior Secretariat officials visited UN headquarters in New York for the fifty-fourth session of the UN General Assembly. During this time they met with representatives of 23 signatory states and 14 non-signatory states, in addition to the representatives of the P-5. The Director-General also had meetings with the Secretary-General, Kofi Annan, the Deputy Secretary-General, Louise Frechette and the Under Secretary-General for Disarmament Affairs, Jayantha Dhanapala.

On 19 October a statement by the Director-General was circulated to the First Committee of the General Assembly. After briefing delegates on the achievements of the OPCW since his statement to the committee last year the Director-General highlighted a number of important areas related to the implementation of the Convention. While reporting that three of the four possessor states will have begun destroying their chemical weapons stockpiles by the end of 1999 he acknowledged the challenge faced by the

fourth, Russia and predicted that the destruction of its stockpile would require “a considerable financial effort on a global scale”. Turning to the chemical industry, the Director-General praised its cooperation and support for the OPCW but alluded to the problems caused by the continuing lack of an Article VI declaration from the USA. Addressing the danger of chemical weapons use by non-state actors, the Director-General invited states parties to join him in a joint brainstorming exercise to consider ways forward. On the subject of universality the Director-General admitted that progress in 1999 had been “disappointing” with only five new member states joining the OPCW and noted that many states seem “blissfully unaware” of the impending trade restrictions on Schedule 2 chemicals. He also said that the linkage frequently made by Arab states between their accession to the CWC and Israel’s ratification of the NPT did not benefit anyone in the region. In conclusion the Director-General stated that the Convention “will not survive to reach its full maturity if the benign neglect currently shown by some of its major actors continues unabated”.

During 7–17 November the Director-General paid a series of official visits to Australia, Singapore and Switzerland, meeting with government ministers and officials. In Australia he addressed students and faculty of the University of Sydney and in Switzerland he visited the AC-Laboratory in Spiez, one of 12 laboratories worldwide designated by the OPCW for the analysis of authentic samples, and addressed the Geneva Centre for Security Policy. He also visited the DSO laboratory in Singapore.

Outreach activities During 3–5 November the Secretariat, in cooperation with the government of Kenya, co-hosted a regional seminar in Nairobi for African countries. The seminar was attended by 31 participants from 18 states parties, three signatory states, one non-signatory state and from the Argonne National Laboratory in the USA. The seminar was preceded by a one-day workshop for the personnel of the Kenyan national authority. The Secretariat hosted a visit by the 1999 UN Disarmament Fellowship Programme on 20 September. The Fellows heard presentations from Secretariat personnel and from the Harvard Sussex Program.

Staffing As of 29 November, 474 of the allotted 496 fixed term posts within the Secretariat were occupied. Of these 324 were in the professional and higher category and 150 were in the general service category. Including staff on short term (17) and temporary assistance contracts (30) and others the total number of staff was 535.

In September the Director-General established a contract renewal board in order to give staff members with contracts expiring in 2000 as much notice as possible whether their contracts would be extended. Of the total of nearly 500 fixed term staff members 282 have contracts expiring in 2000. Of these 197 are in the professional and higher categories and 85 are in the general service category.

The Director-General told the Council’s seventeenth session that of these staff members 9 (3.5 per cent) are currently not seeking contract renewal, 6 (2 per cent) are being offered renewed contracts, 44 (15.5 per cent) are being offered contract renewals for one year, 205 are being offered renewal for two years and 18 (6.5 per cent) are being offered renewal for three years.

Subsidiary bodies

Scientific Advisory Board During the period under review a number of the temporary working groups (TWGs) established by the Scientific Advisory Board (SAB) met. The TWG on Adamsite met in The Hague during 7–8 October and the TWGs on equipment issues and destruction technologies held a combined meeting in Münster, Germany during 11–12 October. The SAB will meet for its third session during 14–16 December at which it will discuss the reports and recommendations of the TWGs.

Future work

Although it has now been in existence for over two and a half years the OPCW is still faced with a number of challenges. It has become clear during the period under review just how difficult it will be for states parties to meet the 2007 deadline for the destruction of their chemical weapons stockpiles and related facilities without adequate funding, from the international community if necessary. On the chemical industry side the ramifications of the continued absence of an Article VI declaration from the USA are likely to endure long after the declaration itself is submitted. A number of unresolved issues still require resolution, most important among them are the usability guidelines for old chemical weapons which would allow the Secretariat to close the files on 24 inspections and guidelines for Schedule 2 and 3 chemicals in mixtures as they relate to plant site declarations and to declarations of transfers. This latter issue is gaining in importance as Schedule 2 chemicals may not be transferred to nor received from non-states-parties beyond 29 April 2000. Further in the distance is the first CWC review conference which will have to be convened sometime after May 2002, but for which the preparatory process will have to be considered during 2000. According to the Director-General in his opening statement to the Council’s seventeenth session the session of the Conference in 2000 will mark “a watershed in the life of the OPCW: a point from which we can either go forward to even greater success and the eventual achievement of our goal, or from which we could begin a long decline into morbidity and ineffectiveness”.

This review was written by Daniel Feakes, the HSP researcher in The Hague

What follows is taken from issue 46 of the Harvard Sussex Program CBW Chronicle, which provides a fuller coverage of events during the period under report here and also identifies the sources of information used for each record. All such sources are held in hard copy in the Sussex Harvard Information Bank, which is open to visitors by prior arrangement. For access to the CBW Chronicle or to the electronic CBW Events Database from which it is derived, please apply to its compiler, Julian Perry Robinson.

1 August In the OPCW only 12 member states (Albania, Belarus, Canada, Czech Republic, Denmark, Finland, France, Lithuania, Romania, Sweden, Switzerland and the UK) have yet submitted information on their national programmes related to protection against chemical weapons, as they are required to do each year by Article X.4 of the Chemical Weapons Convention, so the Director-General later reports to the Council. Moreover, of the 12, only five (Belarus, Czech Republic, France, Sweden and the UK) have yet submitted more than one annual declaration. [Note: Article X.4 is the only part of the entire treaty that expressly accords value to transparency.]

1 August In the United Kingdom, the fact that the government's CBW defence research establishment at Porton Down in Wiltshire has for at least five years been creating, for protective purposes, lethal genetically modified organisms receives publicity in the newspapers, which also are currently reporting an upsurge of national concern about genetically modified crops.

2 August In China, Heilongjiang provincial government discloses 66 items of documentation concerning BW experiments conducted on human beings by Unit 731 of the Imperial Japanese Army. The documents are Japanese in origin and date from 1941–44. This is reportedly the first time that Chinese authorities have placed papers abandoned by Unit 731 in the public domain.

2–3 August In Canada a two-part television documentary, *Red Lies*, is shown on CBC *National Magazine*. The documentary is about Soviet/Russian BW activities. Speaking to camera are BW specialists who had first done so for a similar documentary by the British Broadcasting Corporation a year previously [see 13–14 Jul 98 and 13 Oct 98], including Dr Ken Alibek, former Deputy Head of USSR Organization PO Box A-1063 [see 15 Oct 97], and Dr Christopher Davis, formerly of the UK Defence Intelligence Staff [see 6 May]. They are now joined by two more former participants in Soviet BW research, Dr Vladimir Pasechnik [see 27 Mar 94] and Academician Igor Domaradskiy [see 30 Apr 98 and 6 May].

Much of the first part of the documentary concerns the Sverdlovsk anthrax outbreak of 1979. It includes interviews with Russians directly affected by the disease, but adds little to what is already in the public domain. The CBC reporter, Michael McAuliffe, says that inside Sverdlovsk Military Compound 19 (from which anthrax spores responsible for the outbreak evidently escaped [see 18 Nov 94]) “the army was secretly coping with its own casualties”, including “the many soldiers who would have died”. This information he attributes to Dr Margarita Ilyenko, director of one of the Sverdlovsk city hospitals at the time of the outbreak, from which position she had recently retired.

Asked why the USSR had decided to expand its BW-weapons programme just as the 1972 Biological Weapons

Convention was being concluded, Academician Domaradskiy says: “I think one of the reasons was that it was assumed that due to the great achievements in the area of molecular biology and genetics in England, the States, probably Canada, that they had likely managed to be ahead of where we were at that stage. Somehow we had to make up the gap that developed between us and those countries. And it was precisely because the Convention had already been signed by them that all this research was happening.”

2–3 August The US National Academy of Sciences conducts hearings on the projected expansion of restrictions on international scientific exchanges in the interests of the national security. Legislation to this end is being advocated by some members of Congress in the wake of alleged security breaches at Los Alamos National Laboratory and the investigation by the Cox Commission. The Department of Energy is now introducing new security measures throughout the National Laboratories. Energy official James Jackson tells the meeting that a new “sensitive subjects list” has been drawn up. This goes far beyond the nuclear physics, the bomb engineering and the cryptography of earlier lists. It now reaches into biology, for the new list has been extended to categories of study judged sensitive because of their possible application in CBW, namely “genetic research techniques, PCR and specialized equipment and genome sequences”. The Long Island *Newsday* reports that other agencies that fund biological research in the United States are also considering or developing security guidelines that would place limits on some public discussion and publication of biological research results.

2–5 August In Switzerland, at Cartigny, the Federal Department of Foreign Affairs joins with the Swedish government, the US State Department and several international NGOs in sponsoring a seminar convened by the Washington Kurdish Institute (WKI) and Dr Christine Gosden [see 16 Mar] for the purpose of developing plans for a “treatment and research programme for survivors of chemical and biological weapons attacks in Iraqi Kurdistan”. Participants include the UN Deputy High Commissioner for Human Rights, the Mayor of Halabja, representatives of the three principal Kurdish political parties (the KDP, the PUK and the IMK), the health ministers of the Kurdistan regional governments, and the deans of the medical colleges of Suleymaniya, Erbil and Dohuk. There is agreement to establish a post-graduate medical institute based at those three medical colleges and at a hospital in Halabja in order to begin the treatment and research programme. The press release subsequently issued by the WKI also reports agreement on the establishment of a coordinating council “to provide a framework for development and prioritization of resources, international advocacy, communications and data exchange between centers, and coordination with regional governments and international NGOs”. Writing later in the *Washington Post*, Dr Gosden and WKI Executive Director Mike Amitay say: “We are grateful for

the US State Department's support for this crucial initial stage but, unfortunately, almost no funding exists to build on the rudimentary structure and to operationalize treatment and research programs. It is imperative that governments and agencies worldwide join this effort in order that we can learn the lessons of Halabja."

3 August In Pretoria, the Transvaal Provincial Division of the High Court of South Africa approves an order for seizure of assets held by Dr Wouter Basson, former head of the South African apartheid-era CBW programme whose trial on charges of murder, theft, fraud and trading in drugs [see 24 Mar] is set to begin on 4 October. The order is made under novel asset-forfeiture law laid down in the 1998 Prevention of Organized Crime Act. In this case the law allows the National Director of Public Prosecutions to attach property up to the value of R44 million (US \$7.3 million), which is the amount that Basson is alleged to have misappropriated from the state.

3 August In New York, the outgoing Executive Chairman of UNSCOM [see 30 Jun New York], Ambassador Richard Butler of Australia, publishes, in the first issue of the new monthly magazine *talk*, a frank account of his work at UNSCOM. He begins by explaining why he had not sought a new term of office: "The larger issue was that the situation inside the UN had grown untenable. Russia, a key member of the Security Council, had become Saddam's most aggressive advocate — and has continued in that role right up through this summer, when Moscow falsely accused me of endangering millions of Iraqi by leaving behind dangerous chemicals and explosives in our laboratory in Baghdad [see 1 Jun]. Deeply alarming, too, was the behavior of the secretary-general of the UN, Kofi Annan, who repeatedly tried to deal with the problems raised by an outlaw regime by papering them over with diplomacy. Annan and his immediate staff sought to hand Saddam the greatest possible prize: the destruction of UNSCOM, a thorn in the side of both men. Saddam wanted the thorn removed so that he could retain his weapons. Annan wanted it removed because UNSCOM was too independent to work within the mainstream of the UN." These themes are developed in the body of the article, chiefly through descriptions of the successive crises during 1997–99 that laid UNSCOM low. At stake, he concludes, is more than just Iraq: "If Saddam Hussein gets away with facing down the UN and retains and rebuilds his weapons of mass destruction, he will destroy the world's best shot at controlling the spread of such weapons. He will also destroy the authority of the supreme international body charged with maintaining peace and security — the Security Council of the United Nations."

In subsequent interviews Ambassador Butler expands a little on his article, which receives much notice and also substantive comment by others in and around UNSCOM.

4 August The Tokyo Forum for Nuclear Non-Proliferation and Disarmament, which is a high-level international commission of experts established by the Japanese government in 1998, releases its report, *Facing Nuclear Dangers: An Action Plan for the 21st Century*. The report includes consideration of CBW. It urges a strengthening of the BWC and the CWC in the following terms: "The verification arrangements of the Chemical Weapons Convention have been eroded by implementation decisions, making it more difficult to detect non-compliance. In addition, at a time when biological weapons capabilities are growing and new scientific advances suggest increased availability of biological weapons in the future, negotiations on a verification protocol to the Biological Weapons Convention are still problematic. Moreover, the international community

has found no successful way to deal with proven cases of material breaches or other non-compliance in the context of the 1925 Geneva Protocol, the Chemical Weapons Convention and the Biological Weapons Convention. Unless the international community adopts strengthening verification measures for these accords and effective measures to deal with non-compliance, chemical and biological threats could become a significant concern for international security."

There is further reference to adverse implementation decisions later in the report: "While the development of detection and surveillance techniques is improving monitoring systems, political factors threaten to weaken stringent verification, as is now evident in relation to [UNSCOM] or the [OPCW]. Some implementation decisions by the United States and other OPCW states parties have weakened the implementation provisions of the Chemical Weapons Convention, and this is a matter of concern for future global disarmament agreements. Strengthened verification of the Chemical Weapons Convention, and of the Biological Weapons Convention, is essential for global efforts to eliminate all weapons of mass destruction. To detect cheating, and so permit the progressive reduction and elimination of nuclear dangers, monitoring assets must be harnessed in tandem with political will."

4 August In Sudan, chemical weapons are "probably" used in an attack on the southern town of Loka in which Antonov aircraft dropped two bombs from a high altitude, according to a statement issued by Norwegian People's Aid (NPA), which runs four hospitals in southern Sudan.

In Oslo the day before, NPA had issued a statement saying that "a team of scientists has found evidence from soil samples that indicated use of toxic chemicals in the bombing raids" conducted a fortnight previously in southern Sudan [see 23 Jul]. Blood samples that had been taken in the aftermath of that earlier attack by doctors visiting Lainya and Kaaya under UN auspices [see 23 Jul] are, on 11 August, sent for analysis to the US Centers for Disease Control and Prevention in Atlanta, according to the UN Secretary-General's spokesman. The Sudanese government denies use of any weapons of mass destruction.

5 August In the UK, the City of London Police Force discloses, in its annual report, that it has been training senior officers in command procedures necessary for responding to chemical/biological terrorist incidents, and also that antichemical training has been given to its mobile counterterrorist unit. Similar precautions are being taken by the other three police forces with responsibilities for the country's capital. Officers from all four forces, including the Metropolitan Police (Scotland Yard) anti-terrorist branch, are regularly briefed by CBW experts, so the London *Times* reports next day, attributing "senior police sources".

5 August The US Department of Commerce Bureau of Export Administration imposes a \$25,000 civil penalty on a Chicago corporation, Starlite Technical Service, Inc, in connection with unauthorized exports of US-origin chemicals on the Australia Group precursor control list. The chemicals had been exported without licences to Lebanon and Colombia on five occasions between January 1994 and December 1996.

5 August The US Defense Department announces that it has restructured its contract with BioPort Corporation [see 30 Jun], which is the sole source of the vaccine being used in its forces-wide Anthrax Vaccine Immunization Program (AVIP). The Department will now pay \$10.64 per dose instead of \$4.36,

and BioPort must provide 5.3 million doses instead of 7.6 million, beyond which it may sell any additional production on the commercial market. Also, the Department will make an advance payment of \$18.7 million to enable the company to pay off its creditors, to be repaid at \$4.60 on every dose subsequently billed to the Department.

6 August The United Nations Secretariat issues a Secretary-General's Bulletin on *Observance by United Nations forces of international humanitarian law*. This sets out fundamental principles and rules of international humanitarian law applicable to UN forces conducting operations under UN command and control. Included in the Bulletin is the reminder that UN forces are barred from using certain weapons and methods of combat, including "asphyxiating, poisonous or other gases and biological methods of warfare". The Bulletin, which is to enter into force on 12 August, states that its listing of principles and rules is not exhaustive, and does "not replace the national laws by which military personnel remain bound throughout the operation". [Note: Notwithstanding this disclaimer, it is striking that the Bulletin offers no reminder to its readers that the use of chemical weapons, broadly defined, is now illegal under international conventional law.]

6 August In the US Congress, the House-Senate conference committee on the *National Defense Authorization Act for Fiscal Year 2000* agrees the following language for Section 1305: "No fiscal year 2000 Cooperative Threat Reduction funds, and no funds appropriated for Cooperative Threat Reduction programs after the date of enactment of this Act, may be obligated or expended for planning, design, or construction of a chemical weapons destruction facility in Russia". The effect of this is to eliminate all the \$125 million sought by the administration for further work to establish the chemdemil pilot plant at Shchuch'ye in Russia [see 15 Jun]. Instead, the conference report states that \$20 million may be appropriated for "security enhancements at chemical weapons storage sites in Russia", with the other \$105 million being authorized for other CTR projects, including \$12 million for "biological weapons proliferation prevention activities in Russia". The report, at pages 814–16, cites the recent GAO study of the CTR programme [see 13 Apr] in explanation of its action. Conferee Senator Pat Roberts, who chairs the Senate Armed Services Emerging Threats Subcommittee, tells reporters that Congress has no way of knowing whether Russia is spending its chemdemil assistance as intended: "If the Russians are soaking up the money for other purposes, then it's just a waste of taxpayer dollars". He says he has no evidence that the funding is being misused, but that is because there is no "transparency" in, as he is reported, "Moscow's chemical weapons program". He adds: "I think, basically, chemical weapons pose more of an environmental threat to Russia than a security threat to the United States. Basically, we have to spend money where our national security threats are." He concludes that, until Russia "shows some good faith" by putting money of its own into the Shchuch'ye facility and gives the United States more information about its weapon program, the project will remain in limbo.

8 August In Sydney, during the 11th International Congress of Virology where he is delivering the opening address, Dr D A Henderson of Johns Hopkins University in the United States is reported by next day's *Sydney Morning Herald* as saying that no country, including Australia, has taken adequate precautions to protect civilians against the serious threat of bioterrorism, and that Australia, as host to the next Olympic Games, should be stockpiling antibiotics and vaccines. "We

know we've got terrorist groups who want to inflict a lot of casualties. We also know Russia has produced anthrax, plague and smallpox in quantities which are absolutely staggering." Beyond the fact that the Olympic Security Command Centre and other authorities in Australia have long been working on counterterrorist measures, little information about the actual nature of those measures is in the public domain.

9 August In Saudi Arabia while chairing the weekly session of the Council of Ministers, Crown Prince and Deputy Prime Minister Abdullah Bin Abd al-Aziz stresses the commitment of the Kingdom to supporting all efforts aimed at removing weapons of mass destruction throughout the world, particularly in the Middle East, which, in the report by the Saudi news agency SPA, "the Kingdom wants to see as a clean region, free from all weapons of mass destruction, without exception". A recently concluded visit by Saudi Defence Minister Prince Sultan Bin Abd al-Aziz to the Kahuta nuclear facility in Pakistan had given rise to speculation abroad about possible Saudi interest in acquiring such weapons.

9 August In Canada, a spokesman for the Office of the Solicitor-General, which has federal responsibilities for responding to bioterrorism, has just told reporters that, although the risk of a bioterrorist incident was rated low, "the threat of such terrorism cannot be discounted and so simple prudence dictates that we maintain and improve efforts to prevent such attacks". The Royal Canadian Mounted Police and the Canadian Forces have established a Joint Biological Chemical Response Team that can be deployed rapidly to distant parts of Canada. The spokesman, Patrick Gant, states that, under the national counter-terrorism plan, the federal government has primary responsibility for crisis management, whereas consequence management is the responsibility of provincial and municipal governments.

9 August From Panama City it is reported that the Panamanian Ministry of Health, which has been responsible for the country's declarations under the CWC to the OPCW [see 19 Nov 98], is unable to clarify its declaration of the presence on Panamanian territory of abandoned chemical weapons [see 21 Jun OPCW and 30 Jun Panama] until the United States releases more information about exact locations of the weapons. Using the US Freedom of Information Act where necessary, two non-governmental organizations — the Fellowship of Reconciliation and the Centro de Estudios y Accion Social de Panama — have ascertained that, in the early 1940s, there were 84 tons of US mustard gas in Panama, 10 tons of phosgene and some 27,000 chemical munitions of various types. Moreover, the Fellowship of Reconciliation has recently reported the existence of records showing that in 1964 the United States had shipped at least three tons of VX nerve-gas into Panama. [Note: In its own initial declaration under the CWC — see 29 May 97 — the United States seems not to have declared any abandoning of chemical weapons at its former test or storage locations in Panama.]

9–13 August The Czech Republic, as part of the assistance it is offering in accordance with CWC Article X.7, hosts a training course in anti-CW civil defence at the Institute of Civil Protection in Lazne Bohdanec. The course is attended by 40 people from 29 CWC states parties.

9–15 August In Uzbekistan, a team of 16 experts sent by the US Defense Department is working at the USSR-era Chemical Research Institute in Nukus. An official spokesman in

Washington, Lt-Col Ike Skelton, later says that the team had been conducting "a technical and engineering survey to define the requirements for dismantling the chemical weapons unique capabilities present in this facility". This is the first step in implementing the bilateral US-Uzbek chemdemil agreement signed three months previously [see 25 May]. A source at the Uzbek Defence Ministry has told Interfax that the facility has been shut down and part of its equipment removed to Russia; the US experts are said to be interested in the present condition of the facility, mainly its effect on the environment.

10 August In Montreal, during the joint annual meeting of the Canadian and American Phytopathological Societies there is a symposium on *Plant Pathology's Role in Anti-Crop Bioterrorism and Food Security* at which several papers on the subject are presented [see also 22 Jun].

10 August In the United States, lawyers for Saudi businessman Saleh Idris [see 3 May] reportedly announce that he is suing the US government for damages arising from the destruction by cruise missiles of his pharmaceutical factory in Sudan, the Al-Shifa plant near Khartoum. Later he is said to be seeking \$30 million in compensation for the plant, though in fact no such suit has yet been filed.

10-11 August In Berlin, during the 40th General Assembly of the International Union of Pure and Applied Chemistry, there is a meeting of the IUPAC Ad Hoc Committee on Chemical Weapons Destruction Technologies.

12 August The UN Secretary-General transmits to the General Assembly a report on the work of the Advisory Board on Disarmament Matters. In regard to biological weapons, on which the board has received two informal papers, one from Peter Goosen of the South African Foreign Ministry and the other from Hanan Bar-On of the Weizmann Institute in Israel, the Board advocates "heightened vigilance". It acknowledges the need for a verification regime and also the challenge of creating one, given the dual-use nature of biological research and the difficulties in differentiating between defensive and offensive development. It underlines the value of industry participation in the process of formulating a BWC verification system, noting that such participation had been decisive in the success of the CWC. It observes that additional measures "could usefully supplement the future verification regime, including a code of conduct for scientists and criminalization of the threat or use of biological weapons".

13 August In the United States, the *Chronicle of Higher Education* carries a study of the possible impact on US academic institutions of data-reporting requirements now envisaged in the BWC Protocol rolling text. Funded by the Department of Energy and conducted by the Task Force on Biological Weapons of the American Society for Microbiology, the study is based on a survey of administrators at more than 1400 institutions. It suggests that at least 300 US colleges and universities would have to submit reports if the Protocol required such reporting for each of the human, animal or plant pathogens or toxins currently listed in the rolling text. The report also notes that less than 20 percent of the institutions surveyed maintained centralized inventories of the listed biologicals.

13 August The US Defense Department has seemingly had access to the report of an OPCW inspection in Russia, according to the *Washington Times*. Having stated, with attribution only to unidentified "Pentagon officials", that the

secret version of this year's Administration report to Congress on arms control compliance will repeat the previous year's judgement that "certain elements of the former Soviet biological weapons program continue", the newspaper presents the following: "The Pentagon also learned some startling information as the result of a recent inspection in Russia that revealed how Moscow is violating another agreement: the Chemical Weapons Convention. Inspectors working for the Organization for the Prohibition of Chemical Weapons found a cache of high-technology poison gas arms that were not declared by Russia as required under the treaty. They included a bunker-penetrating guided bomb that spreads a semi-persistent nerve gas and a 'flechette' cluster bomb containing chemical agents spread by metal shards designed to penetrate chemical protective gear." [Note: The plausibility of this story is diminished towards vanishing point by the degree of access it imputes to OPCW inspectors.]

14 August In the United States, concern about bioterrorism directed at the livestock industry [see 22 Jun] continues to be evident. In Enterprise, Oregon, the state veterinarian, Dr Andrew Clark, tells the annual meeting of a local stockgrowers association: "We are sitting ducks for agricultural terrorism". He goes on to talk about state and federal initiatives now underway to prepare for the outbreak of foreign livestock diseases in the United States, whether their origins be intentional or accidental. One such initiative had begun the previous year, after the issue had come up at the annual meeting of the Livestock Conservation Institute: the creation across the country of a network of 250 diagnostic technicians trained in recognising exotic diseases of livestock.

15 August In Sydney an international symposium on bioterrorism is addressed by Dr Ken Alibek, Dr Chris Davis [see 2-3 Aug] and Dr D A Henderson [see 8 Aug]. Dr Alibek speaks of the potency of the Soviet weapon-fill formulations of BW agents, saying that dissemination of the anthrax-spore fill at a rate of 3 kg per square kilometre had been expected to cause 50 percent casualties among the exposed population; for the Marburg-virus fill the corresponding figure was 1 kg/km². Dr Henderson states his view that the most threatening BW agents today are, in ascending order of concern, tularemia bacteria, haemorrhagic-fever viruses, botulinal toxin, plague bacteria, anthrax bacteria and smallpox virus. Dr Davis states that the USSR BW programme had employed more than 60,000 people in 200 laboratories producing multi-ton quantities of deadly germs.

16 August Johnston Island, location of what remains of the US Pacific stockpile of chemical weapons and of JACADS, the chemdemil facility in which the stockpile is being incinerated, is evacuated of its 1100 military and civilian inhabitants as Hurricane Dora approaches. In fact the hurricane passes 75 miles south of the atoll.

16 August The US General Accounting Office releases two new reports on the country's chemical and biological defences: *Coordination of Nonmedical Chemical and Biological R&D Programs* and *Program Planning and Evaluation Should Follow Results Act Framework*.

16-18 August In Iran, Japanese Foreign Minister Masahiko Komura is making an official visit, at the close of which the official Iranian news agency IRNA releases a summary account of proceedings. This records that the Secretary of the Iranian Supreme National Security Council and Vice Speaker of the Majlis, Hasan Rowhani, had said that Iran was ready to

cooperate with Japan in the elimination of CBW weapons from Asia.

17 August In Seoul, where there is tension because of a reportedly impending missile test by North Korea, an hour-long exercise of air-raid precautions is conducted. Besides customary civil-defence drills, this includes a dozen military helicopters and vehicles rushing to wash-down an eight-lane boulevard contaminated in the simulated attack.

17 August President Clinton signs into law HR 2465, the *Military Construction Appropriations Act, 2000*, but expresses several concerns about the legislation, including one on its chemdemil provision: "For the second consecutive year, the Congress has not provided the requested level of construction funding for the Chemical Weapons Demilitarization program. This year's reduction of \$93 million to my request substantially increases the risk that the United States will not meet the 2007 Chemical Weapons Convention deadline for the destruction of these chemical weapons. The sooner these weapons are destroyed, the safer we will all be."

19 August In Sudan, the Minister of Information and Culture, Dr Ghazi Salah al-Din, conducts a televised press conference to mark the impending anniversary of the US destruction of a chemical plant in Khartoum [see 10 Aug]. He says that his government "renews its call on the [UN] Security Council to discharge its responsibilities by sending a fact-finding team to Sudan to investigate the destructive bombing of al-Shifa pharmaceuticals factory, and to ask the American administration to courageously recognise the team's findings". Asked about the recent allegations of the use of chemical weapons by his government in the south of the country [see 4 Aug], he describes them as "baseless and unconfirmed rumours", continuing: "We are, however, pleased that the initial indications which we got from the UN say that these accusations were not taken seriously. Rather, all evidence indicates they are untrue." In contrast, the Sudan People's Liberation Army accuses the UN of cover-up, its Nairobi spokesman Samson Kwaje pointing to the failure of the UN to publish the results of the investigation that had been conducted in Lainya and Kaaya by two of its Operation Lifeline Sudan doctors.

19 August In the United Kingdom, Wiltshire Police launch a criminal investigation into the death in 1953 of a volunteer from the Royal Air Force, Ronald Maddison, who had been exposed to sarin nerve-gas during experiments at the UK government's CBW defence research establishment at Porton Down. Later, there are reports that the inquiry has been broadened to include 25 more "premature deaths" among former Porton experimentees. Later still, there are calls for the inquiry to be extended to the former Porton out-station at Nancekuke, in Cornwall, where it is alleged that toxic chemicals damaged the health of at least 40 workers.

20 August In Israel, where the Supreme Court will shortly be ruling on the admissibility of new evidence that Nahum Manbar wishes to use in his appeal against conviction for aiding Iranian CW armament [see 15 Jul 98], the Tel Aviv newspaper *Yedi'ot Aharanot* devotes much of its Sabbath supplement to a detailed account of the case, in which different agendas of Israeli, British, Argentinian and Polish intelligence services had become intertwined with a deal to ship thionyl chloride from China to Iran, apparently for purposes of mustard-gas and/or nerve-gas manufacture, through the intermediary of Manbar and his business associate Joy Kiddie [see 22 Jan], and with

the involvement of Richard Tomlinson [see 13 Jun], a former agent of the UK secret intelligence service MI6. The newspaper reproduces what appears to be the entire 3900-word affidavit sworn for Manbar's appeal [see 12 May] by Tomlinson in Zurich on 28 May, which presents unprecedented detail about his work in MI6, even about certain of his former colleagues, and about his assignment during 1994-95 to penetrate and, apparently, sabotage an Iranian chemical-weapons programme.

The 'low concentration' issue that currently remains unresolved in the OPCW makes an appearance in the Tomlinson affidavit: "The weapons industry normally requires a higher concentration of the substance, but this does not mean that thionyl chloride cannot be used when received in low concentration levels. Once you get hold of the substance, you can refine it yourself and make it more concentrated. According to UN regulations, there is a certain level below which the substance can be traded, at low concentrations and quantities. This, however, is nonsense because, as I said, the substance can be manipulated to make it usable in the weapon industry."

22 August In the United States, further particulars of the Pacific Ocean biological-weapons trials of 1968 [see 25 Feb 98] are related in the *St Louis Post-Dispatch* by George Johnson, professor of biology and genetics at Washington University in St Louis. He describes a trial conducted one evening in July 1968 in which a single low-flying Marine Corps Phantom jet discharged an underwing dry-agent spraytank upwind of a line of barges stretching 50 miles downwind off Johnston Atoll. The barges contained hundreds of caged rhesus monkeys. Half of the monkeys died over the next few days.

23 August At United Nations headquarters, the Secretary-General transmits to the president of the Security Council a note from UNSCOM responding to questions from the Council about UNSCOM inspection methods in Iraq. In a follow-up letter next day, the Secretary-General emphasizes the sensitivity of the information contained in the note. This, according to an unidentified source quoted by Reuter's wire-service, is because of the technical information presented about the purity and stability of Iraqi CW agents. The note is said to be 40 pages long and to have a 20-page annex.

25 August The US National Academy of Sciences publishes the report, *Review and Evaluation of Alternative Technologies for Demilitarization of Assembled Chemical Weapons*, that has been prepared for the Defense Department by a panel of the National Research Council as input to its impending report to Congress [see 7 May]. The panel, chaired by Dr Robert Beudet of the University of Southern California, has investigated the seven leading non-incinerative alternative chemdemil technologies, and has concluded: "An extraordinary commitment of resources will be necessary to complete the destruction of the assembled chemical weapons stockpile in time to meet the current [CWC] deadline [29 April 2007] using any of the [alternative] technology packages".

25 August The US Administration, in a report to Congress on Iraqi development of weapons of mass destruction required under the *Foreign Operations, Export Financing, and Related Programs Appropriations Act, 1999*, states: "We are concerned by activity at Iraqi sites known to be capable of producing WMD and long-range ballistic missiles, as well as by Iraq's long-established practice of covert procurement activity that could include dual-use items with WMD applications. In the

absence of UN inspectors on the ground to carry out the existing Security Council mandate, our concerns about the potential meaning of these activities will persist.”

25–28 August In Washington, the Assembled Chemical Weapons Assessment (ACWA) Dialogue meets to continue its mandated function of facilitating and accelerating the US chemdemil programme, and of ensuring integration of the concerns, input and ideas of the full diversity of interests involved in the destruction of chemical weapons. Participating are: individuals from the nine states of the Union where there are stockpiles of chemical weapons; state regulators; tribal representation; US Environmental Protection Agency staff; Defense Department staff, both from headquarters and from stockpile sites; and representatives of national citizen groups that regularly work on chemdemil-related issues. Presented to the Dialogue is the evaluation of the latest round of demonstrations of chemdemil technologies alternative to the baseline technology of incineration. These demonstrations, of three selected technologies, had taken place during January to May 1999 [see 7 May and 25 Aug], and were responsive to section 8065 of Public Law 104–208 (the *Omnibus Consolidated Appropriations Act, 1997*) requiring an evaluation of the effectiveness of each alternative chemdemil technology identified and demonstrated under the ACWA programme. Congress is scheduled to receive the report of such an evaluation in a month’s time.

26 August In the United Kingdom, the technical director of the CBW defence laboratories at Porton Down, Dr Rick Hall, says on BBC radio: “We have a new vaccine against plague [see also 10 Dec 96 and 13 Mar 97] that is at a particularly advanced stage of development that is produced by genetic engineering [see also 1 Aug]. And of course once it is licensed — through exactly the same process as any other medicine — it will not only provide increased protection for the UK and its armed forces, but it will also be available to help protect civilians in parts of the world where plague occurs naturally.” A Porton spokesperson says: “We have already seen that the vaccine is efficacious, it is just a case of doing some tests on human volunteers now [see also 19 Aug]”.

26 August US Attorney-General Janet Reno announces that there is to be a full review of the facts concerning the fire that ended the siege, in April 1993, of the premises of the Branch Davidian cult in Waco, Texas [see 19 Apr 93]. The FBI has just confirmed a report that it had used two M651 40mm burning-type CS gas munitions on the morning of its final assault on the premises. This admission stands in contrast to the official Justice Department inquiry, which had stated that the gas used against the Davidians “could not have caused a fire”. It had previously been supposed that only bursting-type (Ferret) and dispenser-type CS munitions, not pyrotechnic ones, had been used by the FBI [see 19 Jul–1 Aug 95], and that the fire could only have been started by the cultists themselves. The new information now emerging indicates that the M651 rounds were employed several hours prior to the conflagration and that they had been launched against a concrete bunker 40 yards away from the Davidians’ wooden compound. Later, the Attorney-General appoints former US senator John Danforth to head the review.

27 August Federation of American Scientists BW Working Group chair Dr Barbara Hatch Rosenberg opens an article in today’s *ASA Newsletter* [see 24 May US Commerce Secretary] thus: “In response to the multiple alarms raised about this year’s fashionable threat, domestic bioterrorism, \$1.4 billion

has been allocated or requested in 1999–2000 specifically to combat terrorism using weapons of mass destruction, primarily biological and chemical [see 16 Jul Monterey]. Some of this is much needed for addressing emerging infectious diseases, whether or not they are caused by terrorists. But all of it is aimed at limiting calamities, if they should occur, rather than preventing them. No one is saying anything about prevention, even though there are multilateral negotiations going on right now in Geneva to strengthen the treaty that outlaws biological weapons. It’s time to get the priorities straight. If any significant act of bioterrorism does occur in the foreseeable future, it will be state-sponsored. Biological weaponry is a sophisticated art, contrary to the flood of rubbish from ill-informed officials and the media about bathtub labs.”

27 August In Washington, the Presidential Special Oversight Board for Department of Defense Investigations of Gulf War Chemical and Biological Incidents [see 13 Jul] releases the interim report it had submitted a week previously to Defense Secretary William Cohen. Among other things, the report expresses agreement with the conclusion of the OSAGWI environmental exposure report *Depleted Uranium in the Gulf* [see 4 Aug 98] that the available evidence did not support claims that DU caused or is causing unexplained Gulf War illnesses.

31 August In Tokyo the Japan Defence Agency submits to the government its budget request for the financial year beginning April 2000, a request which will form part of the budget bill submitted to the Diet in December. It includes \$46 million for anti-CBW protective measures, which is a fivefold increase over the corresponding figure in this year’s budget, an indication of increased concern about North Korean capabilities [see 28 Jul].

31 August OPCW member states have, as of today, made the following facility declarations: *Chemical Weapons Production Facilities* — 60 declared by 9 states (China, France, India, Iran, Japan, Russia, the UK, the USA, and one other); *Chemical Weapons Storage Facilities* — 32 declared by 4 states (India, Russia, the USA, and one other); *Old and Abandoned Chemical Weapons Sites* — 54 declared by 9 states (Belgium, China, France, Germany, Italy [both OCW and ACW sites], Japan, Panama and the UK); *Schedule 1 Facilities* — 25 declared by 19 states; *Schedule 2 Plant Sites* — 352 declared by 24 states; *Schedule 3 Plant Sites* — 382 declared by 27 states; and *Discrete Organic Chemical Plant Sites* — 3502 declared by 49 states.

1 September The OPCW initiates its sixth official proficiency test for its designated and would-be-designated analytical laboratories. Test samples prepared by the Military Institute of Chemistry and Radiometry in Poland are dispatched to 25 participating laboratories in 22 member states. Evaluation is to be undertaken in the United States, by the Edgewood Chemical and Biological Forensic Analytical Center.

1 September President Clinton’s National Security Adviser Samuel Berger includes the following in an article published in the new issue of *US Foreign Policy Agenda*: “The chemical and biological conventions are vital not only to preventing states from acquiring WMD but also, in combination with law enforcement and intelligence, to keeping those weapons away from terrorists. Though the conventions are focused on the obligations of states, not sub-state actors, virtually every state on our State Department’s list of terrorism sponsors has WMD programs. As potential suppliers of such weapons to terrorists,

there is no more worrisome source than these state sponsors. Under a strong nonproliferation regime, states that fail to join or comply with the conventions will be isolated, constrained from obtaining weapons materials, and thus hindered from assisting terrorists with WMD activities.”

He also writes: “We continue to pursue aggressively another key priority announced by President Clinton in his 1998 State of the Union address: strengthening our ability to determine whether nations are complying with the Biological Weapons Convention. We are committed to securing over the next year international agreement on declaration and inspection measures that will make it much more difficult for nations to violate their obligations under the convention.” Later: “We are working with China to conclude new verification provisions to strengthen the Biological Weapons Convention”.

1 September From the US Naval Health Research Center in San Diego, a study is published which shows that US soldiers possibly exposed to nerve gas following the demolition of Iraqi munition dumps at Khamisiyah in March 1991 [see 23 Sep 98] had no more serious illnesses after the war than had other veterans. Led by Dr Gregory Gray, the San Diego study had compared hospitalization records of 124,500 US Army veterans who had been in the proximity of the demolition with those of 224,800 other veterans who had been elsewhere at the time. Out-patient treatment, for which records were judged less reliable, was not considered. The study is published by the Johns Hopkins University School of Hygiene and Public Health in the new issue of the *American Journal of Epidemiology*.

2–4 September In Novosibirsk, there is a NATO Advanced Research Workshop on *Assessment of Sponsored Biological Research In Russia for the New Millennium*. It takes place in Novosibirsk, at the headquarters of the Siberian branch of the Russian Academy of Sciences, under the co-direction of Lev Sandakhchiev [see 19 Feb], director of the State Research Centre of Virology and Biotechnology (VEKTOR), and Jim Wolfram of the US Department of Energy. The scope of the workshop is wide-ranging, but its focus is on the development of scientific and commercial cooperation between Russian and Western companies in the field of biotechnology, including vaccine production. In the background is the problem of creating trust and transparency in the conversion of former biological-weapons structures.

3 September In New York City, Mayor Rudolph Giuliani orders the spraying of malathion insecticide over parts of Queens, and later over many other parts of the city as well, plus the free distribution of insect repellent by 500 city employees. An outbreak of disease first noticed in mid-August in crows and zoo-birds, and then, on 23 August, in people has just been diagnosed as an arboviral encephalitis. From tissue samples, the Centers for Disease Control and Prevention in Atlanta have tentatively identified the virus as that of St Louis encephalitis, but this identification is superseded three weeks later by one of a virus rarely seen in the western hemisphere, namely the West Nile virus or, as a possibility later excluded, a close relative such as Kunjin virus. There is concern that bioterrorism is responsible, and the episode is indeed providing lessons for preparedness against such attack, but the greater likelihood is that mosquitoes have spread the virus from the blood of an infected tourist or of an off-course migratory bird. By the time of the definitive diagnosis, the outbreak has, it later appears, reached its final victims. As of 19 October, the toll is 56 cases of WNV infection, 31 confirmed, and among them 7 deaths.

4 September The UK Home Office is reportedly studying an open letter to Osama bin Laden posted on the internet by a Muslim cleric, Omar Bakri Muhammad, who had been given asylum in the UK after fleeing from Saudi Arabia in 1985. The letter calls on Muslims to rise up in holy war against America and its allies. To reporters, Bakri has been advocating the use of biological weapons in such a war. The London *Sunday Times* quotes him thus: “Using any biological weapons in self-defence is, in Islam, permissible, and I believe that we are currently operating under a defensive jihad. Obviously, we regret what could happen to innocent people, but there are always people who are war casualties or, if you like, victims of war.”

6 September Jack Ooms, [see CBWCB45, p 3] a founding member of the Advisory Board of the Harvard Sussex Program, dies at his home in Spain. He was 74.

6–11 September In Geneva, under the UN Environment Programme, the International Negotiating Committee for an International Legally Binding Instrument for Implementing International Action on Certain Persistent Organic Pollutants (POPs) reconvenes for its third session, INC-3. Participating are 115 governments as well as representatives of UN agencies, of other intergovernmental organizations and of non-governmental organizations including industry, some 420 people in all. The focus is on 12 particular POPs in three categories: *pesticides*: aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, mirex and toxaphene; *industrial chemicals*: hexachlorobenzene and polychlorinated biphenyls; and *unintended byproducts*: dioxins and furans. Agreement is reached to recommend three of the 12 POPs for elimination (aldrin, endrin and toxaphene) and five others for elimination with country-specific exemptions (chlordane, dieldrin, heptachlor, mirex and hexachlorobenzene), eliminations to take place upon entry into force of the treaty. There is also agreement on a procedure for adding chemicals. INC-4 will take place in Bonn during March 2000.

7 September The US General Accounting Office transmits to Congressional requesters its report *Combating Terrorism: Need for Comprehensive Threat and Risk Assessments of Chemical and Biological Attacks*. This reviews the scientific and practical aspects of large-scale chemical or biological attacks by terrorists on US soil: is it easy or difficult for terrorists to acquire, process, improvise and disseminate CB agents so as to cause at least a thousand casualties without the assistance of a state-sponsored programme? The resultant study draws from a broad literature, including classified papers, and many interviews with experts.

The conclusions are as follows: “The ease or difficulty for terrorists to cause mass casualties with an improvised chemical or biological weapon or device depends on the agent selected. Experts agree that toxic industrial chemicals can cause mass casualties and require little if any expertise or sophisticated methods. Most chemical nerve agents, however, are technically challenging for terrorists to acquire, manufacture, and produce. Also, terrorists working outside a state-run laboratory infrastructure would have to overcome extraordinary challenges to effectively and successfully weaponize and deliver a biological agent and cause mass casualties.”

The report recommends that the FBI be asked to produce an authoritative threat assessment, and that this be used to prioritize appropriate countermeasures.

7 September In Utah, at the US Army chemdemil incinerator in Tooele, problems are being encountered in the draining of

sarin nerve-gas from M55 rockets because, in an estimated 75 percent of the remaining rockets, the nerve gas has gelled.

8 September In Jammu and Kashmir, Indian troops are again alleged to have been using chemical weapons [see 12 Jun]. According to an editorial in Pakistan's largest daily newspaper, *Jang*, "Neelum valley, which is largely under the control of Indian forces due to its geographical position, is being targeted with these weapons". The editorial continues: "The Indian Army has always targeted people of this valley with aggression. The other day the Indian Army fired a shell at a border village that fell near two children, who were not injured but died from the emission of poisonous gas. The Indian Army has previously used this type of weapons in many other places."

8 September The US State Department FY 2000 authorization bill, currently in the Senate Foreign Relations Committee, includes language entitled *National Security and Corporate Fairness under the Biological Weapons Convention Act*. This sets out 17 findings by the Congress regarding biological weapons, of which the final one is: "A verification regime which contributes to the control of biological weapons and materials must have a reasonable chance of success in reducing the risk of production, stockpiling, or use of biological weapons while protecting the reputations, intellectual property, and confidential business information of legitimate companies." The proposed Act would oblige the President to conduct a series of "trial investigations and clarification visits" in government establishments and in private industry in order to "determine what verification procedures would meet both industry and national security concerns". A report on the trials would have to be submitted to the Senate Foreign Relations Committee, and it would have to include a classified annex by the Defense Department or the FBI assessing "the risk to proprietary and classified information posed by the verification procedures proposed in connection with the 1972 Biological Weapons Convention".

8 September President Clinton transmits to the US Senate, for its consent to ratification, the International Convention for the Suppression of Terrorist Bombings [see 25 Sep 98]. Also transmitted is a State Department report on the treaty, which sets out certain understandings and reservations. Proposed implementing legislation is to be submitted to the Congress later.

9 September The US Central Intelligence Agency releases the unclassified version of its statutory annual report to Congress, *Foreign Missile Developments and the Ballistic Missile Threat to the United States through 2015*. Prepared by the CIA's National Intelligence Council, the report observes, as one of its Key Points: "The proliferation of medium-range ballistic missiles (MRBMs) — driven primarily by North Korean No Dong sales — has created an immediate, serious, and growing threat to US forces, interests, and allies, and has significantly altered the strategic balances in the Middle East and Asia. We judge that countries developing missiles view their regional concerns as one of the primary factors in tailoring their programs. They see their short- and medium-range missiles not only as deterrents but also as force-multiplying weapons of war, primarily with conventional weapons, but with options for delivering biological, chemical, and eventually nuclear weapons." The report also states that "the probability that a WMD-armed missile will be used against US forces or interests is higher today than during most of the Cold War".

9 September The US Department of Commerce convenes a *CWC Kickoff Seminar* in Washington for executives and representatives of the US chemical industry. This half-day meeting has been organised by a contractor, EAI Corporation. The presentations are by Roger Majak, who is the Assistant Secretary of Commerce for Export Administration, and by other government officials. They address the CWC regulations [see 18 May and 21 Jul], the schedule for anticipated US implementation of the CWC in industry, the declaration and inspection requirements, the protection of confidential business information, efforts to minimize costs and burdens, and the roles of the Departments of Commerce and State.

9–10 September In The Hague, the OPCW Technical Secretariat conducts its *First Induction Workshop* for newly assigned diplomatic personnel involved in the work of the policy-making organs and subsidiary bodies of the OPCW. Participating are 61 representatives of 47 states parties and one signatory state.

10 September The UN Department for Disarmament Affairs has now received from 34 states parties to the Biological Weapons Convention the annual declarations that fell due on 15 April under the voluntary confidence-building measures agreed at the third BWC review conference [see 27 Sep 91]. Eight of the declarations had been submitted on time. More are still awaited.

12 September Leo Zefel, former DuPont chemist who helped shape the industry-related verification provisions of the Chemical Weapons Convention, dies in Wilmington, Delaware, after a long illness. He was 74.

13 September The US State Department seems to be launching a renewed campaign of public diplomacy against the leadership of Saddam Hussein in Iraq. At a press briefing on a new report, *Saddam Hussein's Iraq*, which details Iraqi human-rights violations, noncompliance with UN resolutions and obstruction of the oil-for-food programme, Assistant Secretary of State Martin Indyk speaks of "very real concern" about Iraqi concealment of weapons of mass destruction [see also 25 Aug], saying: "Should he ever bring those weapons out or reconstitute them, and we get evidence of that, then we will use force to take care of the problem". He also says: "The effort to indict Saddam Hussein as a war criminal is now getting under way, and we are using our diplomacy to try to support the establishment of a war crimes commission on Iraq".

13 September–8 October In Geneva, the Ad Hoc Group of states parties to the Biological Weapons Convention reconvenes [see 28 Jun–23 Jul] for its sixteenth session of work on the projected legally binding instrument, or protocol, that will, in the words of the Group's mandate [see 19–30 Sep 94], "strengthen the effectiveness and improve the implementation of the Convention". Participating are 56 states parties and two signatory states. A new rolling text of the projected BWC Protocol is produced, and also a new set of *Proposals for Further Consideration by the Chairman and Friends of the Chair*. The Seventeenth Session is scheduled for 22 November–10 December. [For further particulars see *Progress in Geneva*, above]

A commentary on the BWC Protocol negotiation published during the session by the Quaker UN Office in Geneva includes the following: "The third part of this year's negotiations are nearing completion, to be followed by another round before Christmas. While some feel the protocol can be completed by next autumn and others are less optimistic, there is a sense

that the completion of a 'good enough' protocol is possible. Contentious issues remain, such as the package of verification visit procedures. Increasingly, some parties believe that a weak protocol would be worse than none at all, and are determined not to dilute such an important agreement by reducing it to the lowest common denominator. Whether the negotiations really are in the 'end game' depends on where compromises can be achieved in the coming two to three sessions, but there is a positive air of determination about the negotiations."

At the close of the session, the Chairman of the Ad Hoc Group, Ambassador Tibor Tóth of Hungary, tells Reuter's wire-service that there had been progress on "core issues", including the sensitive question of investigations. He also says: "To fulfil the mandate we have to finish soon. The current stage of development in the negotiations would enable us to finish by mid-2000. It is do-able."

The Reuter report continues: "But diplomats said that countries remained divided over how many military and biotechnological facilities would be opened to international inspectors under the new protocol. Part of the debate is over whether to include facilities which produce animal as well as human vaccines. Another issue is what would 'trigger' inspection of a suspect site. China and Russia are among countries resisting intrusiveness at military sites, Western diplomats add. Negotiators from the United States and other industrialized countries are under pressure from industry to demand provisions to protect commercial secrets which some fear could be leaked during inspections of biotechnology firms. Industrialized countries are keen to leave in place export controls banning transfers of equipment which could be misused. Non-aligned countries including India and South Africa are lobbying for removal of export controls, diplomats say."

14 September The US House of Representatives, by a vote of 419-0, once again passes a bill that would impose sanctions on foreign persons transferring goods, services or technology to Iran that would assist Iranian missile, CBW or nuclear weapons programmes. The bill, *Iran Nonproliferation Act of 1999* (HR 1883), has not yet been considered by the Senate. President Clinton vetoed similar legislation a year previously [see 21 Jul 98] and his advisers reportedly would recommend his vetoing this measure too, because it would "have the effect of undermining multilateral support that is vital to effectively fight proliferation".

In Russia, at which the bill is especially directed, the Foreign Ministry issues a statement warning that the proposed legislation might have "the most negative impact on US-Russian cooperation in the fields of nonproliferation and exports control". Were the bill to become law, the statement continues, "it will be necessary for us to reassess the entire situation concerning Russian-American cooperation on nonproliferation issues, as well as on a range of other military-political issues that stand at the core of our joint efforts to ensure a strategic balance and international stability".

A recent CIA report to Congress [see 9 Sep] has stated that "Iran could test an ICBM that could deliver a several-hundred kilogram payload to many parts of the United States in the last half of the next decade using Russian technology and assistance".

14 September A US Department of Agriculture official, speaking non-attributably at a seminar organised by the Chemical and Biological Arms Control Institute, says that the threat of a biological-weapons attack in the United States has increased because of foreign programmes in anti-agriculture

BW [see also 14 Aug]. The official speaks of the Defense Intelligence Agency having approached his department in 1998 to say that "they had identified foreign threats against agriculture". The current concern was about "proliferation of these programmes from the former Soviet Union into other rogue states where they are more likely to be used against us". The official states that African swine fever has been weaponized, declining, however, to identify the country in which that had been done. The official suggests that an incentive for anti-agriculture bioterrorism existed in the futures market: someone could "go virtually anywhere in the world, make investments, cause a crisis, take the profits, go home, and wait until the next time — and we would never know it happened".

A week later the *New York Times* reports that the Agriculture Department now wants to upgrade its existing Biosafety Level 3 laboratory at Plum Island Animal Disease Center [see 1 Mar 94] into a BL-4 facility where work can be done on animal diseases that can affect human beings. The Department is seeking \$215 million over a three-year period for the purpose. On the gravity of the bioterrorist threat, the newspaper quotes an official of the Department's Agricultural Research Service, Floyd P Horn, saying that "such an attack [on US agriculture], or even a credible threat, would severely disrupt America's economic and social infrastructure for weeks, if not months or years". The newspaper explains that Dr Horn had "helped persuade the Administration to include his agency in January in its counterterrorism plans and programs", whereupon he had then "recruited four former Pentagon intelligence analysts and terrorism experts to form the [ARS]'s first unit to evaluate such threats".

The *Times* states, too, that "intelligence reports increasingly conclude that several countries, including Iraq, have developed germs to attack the food supplies of their adversaries". And it reports on former Soviet weapons programmes. It quotes the director of the Scientific Agricultural Research Institute in Kazakhstan, Dr Sadigappar Mamadaliyev, whose institute, so he says, had been one of four centres in the USSR dedicated to developing lethal germs as weapons against foreign crops and animals. He went on: "The Soviets here concentrated on cow and sheep pox and blue tongue. We also cooperated closely with the All-Russian Institute of Animal Health in Vladimir, Russia, which worked on foot-and-mouth disease, and with the Pokrov Institute of Veterinary Virology, which specialized in African swine and horse fevers."

15 September In London, representatives of the five permanent members of the UN Security Council meet at the request of the United States to consider the Iraq issue and, in particular, the two competing draft Security Council resolutions — the Netherlands-UK draft [see 15 Apr], which has the support of 11 of the 15 Council members, and a China-France-Russia draft — both of which would require resumption of on-site disarmament inspections in Iraq but with very different conditionalities regarding the UN sanctions on Iraq. There is progress but no agreement, and the ministers are scheduled to meet again next week in the margins of the UN General Assembly. There, too, agreement is elusive, although consensus is reportedly emerging that Pasi Patokallio of Finland should head the new Iraq inspection and monitoring commission that would replace UNSCOM.

15 September The US Department of Health and Human Services, through its Centers for Disease Control and Prevention, announces the \$41 million awards to states and major cities for upgrading of capability to provide public-health responses to chemical or biological terrorism [see 21 Jun]. In

all, 127 projects are to be supported, financed from the Department's \$173 million of FY 1999 funding for bioterrorism preparedness [see 30 Oct 98].

15 September In Washington, the United States Commission on National Security/21st Century, which is a Congressionally mandated body chartered in mid-1998 by the Secretary of Defense and chaired by former US senators Gary Hart and Warren Rudman, publishes its initial interim report, *New World Coming: American Security in the 21st Century*. This draws from the work of some 40 "national security scholars and practitioners" convened by the Commission into a study group under the direction of Lynn Davis. From the document produced by this National Security Study Group, the Commissioners have drawn 14 major conclusions. These see the United States remaining a political and cultural force in the world, and the principal military power, at least through 2025, but threatened, nevertheless, by the serious possibility of "unannounced attacks in American cities" and with its armed forces increasingly involved in humanitarian missions or other such operations other than war in trouble-spots around the world. "Global forces, especially economic ones, will continue to batter the concept of national sovereignty. States, terrorists, and other disaffected groups will acquire weapons of mass destruction and mass disruption, and some will use them. Americans will likely die on American soil, possibly in large numbers." CBW weapons receive explicit but superficial mention in both parts of the report. The Biological Weapons Convention is noted, but in disparaging terms.

16 September In Geneva, the BWC Ad Hoc Group at its 16th session [see 13 Sep–8 Oct] is addressed by Ron Manley, the Special Adviser to the OPCW Director General. He speaks of the experiences and lessons learned in the establishment and operation of the OPCW. He does so with candour and in some detail, and responds to questions subsequently put to him by delegations.

17 September President Clinton announces that the United States is suspending restrictions on certain categories of non-military trade, financial transactions, travel and diplomatic contacts with North Korea. This follows the completion of the review of US policy towards North Korea conducted for the President by former Defense Secretary William Perry [see 20–24 May]. It also follows an understanding just reached during US–DPRK talks in Berlin that North Korea will, in the words of Secretary of State Madeleine Albright, "refrain from any long-range missile flight tests for as long as our negotiations to improve relations are underway". Speaking to reporters alongside Dr Perry, the Secretary of State emphasises the closeness of the consultations between the United States, South Korea and Japan throughout the US–DPRK talks and the Perry review process.

20 September The OPCW Technical Secretariat now has 479 position holders for its 496 authorized fixed-term posts, according to a subsequent release of its own data. Of the 479 filled posts, 324 are in the professional and higher category and 155 in the general service category. Including staff on short term and temporary assistance contracts the total number of people at OPCW headquarters is now around 530. With the transfer of six inspectors to the verification division, there are 203 inspectors and inspection assistants. Two P-5 staff members have recently resigned: Pierre Cannone of France, head of the Training and Staff Development Branch, and Donato Kiniger-Passigli of Italy, head of the Media and Public Affairs Branch. They have been replaced, in an interim

capacity, by Carlos Dos Santos Soares of Brazil and Michael Carling of the UK respectively.

20 September In Scotland, the Glasgow *Herald* reports that the UK Defence Ministry has a secret contingency fund to pay compensation to any future victims of anthrax there may be at its former biological-weapons test site on Gruinard Island [see 20 Jul], notwithstanding its declaration in 1990 that the island was now "free from contamination". The newspaper quotes a Defence Ministry official as saying that the inclusion of Gruinard in a list of potential Ministry liabilities was merely a precaution and not a matter for public concern.

20 September A US Defense Department official tells *Arms Control Reporter* that the Department and the Russian Defence Ministry are shortly to begin exchange visits for the purpose of discussing biological defence cooperation. The exchanges will start later this year, when the Defense Department will host a Russian visit to the US Army Medical Research Institute of Infectious Disease at Fort Detrick. *Arms Control Reporter* writes: "The official noted that after the British–Russian–US Trilateral Initiative failed to produce successful results in the early 1990s [see 10–11 Sep 92, 15 Aug 97 and 14 Jan 98], the United States and Russia held a number of 'robust engagements' with Russian civilian biological research institutes. These institutes had formed the backbone of the Soviet Union's Biopreparate [*sic*]. During these engagements, the United States gained a tremendous amount of insight into the nature of these institute's operations, particularly at Vector and Obolensk. The official said that the visits gave the United States confidence that the institutes were not involved in offensive biological activity. DOD hoped to duplicate the success of this program in its initiative with MOD, the official said, while stressing that programs with MOD and civilian institutes were complementary to and not in place of the moribund Trilateral [Process]. He added that Britain had expressed an interest in participating in current US–Russian programs, but that no such plans were underway."

20–23 September In Washington, the US Environmental Protection Agency convenes its *1999 Chemical Emergency Preparedness and Prevention Conference*. Participating are 1134 rescue personnel, community leaders and others from 43 states of the Union and 7 foreign countries. A keynote speaker is Dr Sadayoshi Ohbu, director of neurology at St Luke's Hospital, Tokyo, which had treated 641 people after the sarin attack by Aum Shinrikyo in March 1995. He had been in charge of triage, and he relates his experiences.

21–23 September The US Army Medical Research Institute of Infectious Disease presents a live interactive satellite broadcast on *Biological Warfare and Terrorism: The Medical and Public Health Response* aiming to inform and educate military, medical and public-health professionals. The first session presents an overview of biological agents. The second day's session is on managing a battlefield BW scenario. The final session is on civilian public health and medical response to bioterrorism. The presenters are from CDC and other organizations, as well as USAMRIID.

21–24 September In The Hague, the OPCW Executive Council convenes for its sixteenth regular session [see 26–29 Apr]. [For further details, see *Progress in The Hague* above.]

From Moscow, RIA news agency reports on five documents presented by the Russian delegation, which is led by the Director-General of the new Munitions Agency [see 25 May], Zinovy Pak. Two of the documents are described as

"agreements on checking Soviet-time chemical weapons producing enterprises based in Volgograd and Dzerzhinsk" The other three are requests for conversion of chemical weapons production facilities at Berezniki and Dzerzhinsk. This information stands in contrast to the OPCW *Secretariat Brief* on the Sixteenth Session, which reports the three Russian conversion requests as relating to "a mustard gas production facility at open joint stock company Srednevolzhski chemical plant [see 15 Jun] in Chapaevsk; a facility for filling mustard gas-lewisite mixture into munitions at open joint stock company Srednevolzhski chemical plant in Chapaevsk; and a mustard gas production facility at open joint stock company 'Soda', in Berezniki". No mention is made of facilities at Dzerzhinsk. In the Nizhegorodskaya region, Dzerzhinsk is the location of 7 of the 24 chemical weapons production facilities declared to the OPCW by Russia.

22 September In Japan, a Tokyo district court rules that the government is not responsible for compensating a group of ten Chinese plaintiffs claiming to be victims or relatives of victims of Japanese atrocities during the Sino-Japanese War, including BW experiments [see 2 Aug]. Chief Judge Ko Ito says that the court does not acknowledge the right of a foreign individual to seek compensation for war damages from Japan. There is to be an appeal. From Harbin, where Unit 731 of the Japanese Imperial Army had been based, Xinhua later reports widespread protest against the ruling, which it says "is regarded as unjust and extremely absurd, as it tramples on international law and has deeply hurt the feelings of the Chinese people".

22 September In Russia, Prime Minister Vladimir Putin signs government Resolution 1082, *On the formation of polyclinical consultative-diagnostic centers for examining citizens who live and work in defensive-measure zones established around facilities for storing chemical weapons and facilities for destroying chemical weapons*. Such an action is required under the law on the elimination of chemical weapons [see 2 May 97]. The resolution directs the Ministry of Public Health to draw up a proposal for establishing the special medical centres, and the Economics Ministry and the Finance Ministry are instructed to include the centres in their financial planning, beginning in the year 2000.

22 September In the US House of Representatives, there is an oversight hearing on *Medical Response Plans to Terrorist Attacks* before the National Security, Veterans' Affairs and International Relations Subcommittee of the Government Reform Committee. Chairman Christopher Shays says that previous hearings in the series had examined federal spending priorities and the role of the national government in the early response to terrorism; the present hearings are to assess what is being done to help states and localities build a public-health infrastructure capable of deterring, detecting and, if necessary, treating those affected by terrorist events, particularly bioterrorism. The general theme in what the local, state and federal witnesses say is that local public-health systems remain ill-prepared to respond to chemical or biological terrorist attacks, but that this situation is recognised by the administration, with the Department of Health and Human Services working hard to improve it [see 15 Sep].

23 September The UK Department of Health publishes the *Statement on 2-chlorobenzylidene malononitrile (CS) and CS Spray* which, with the support of the Home Office, it had requested from the Committees on Toxicity, Mutagenicity and Carcinogenicity of Chemicals in Food, Consumer Products and the Environment [see 24 Sep 98]. The Statement, which is

detailed and closely documented, notes that there are considerable data available to assess the toxicity of CS itself, and to a lesser extent, the solvent MIBK itself, but that there are essentially no such data on the formulated spray. It says that there are no concerns relating to the mutagenicity, carcinogenicity or teratogenicity of CS; and, as for the MIBK solvent, while there had been no carcinogenicity or multigeneration reproductive toxicity assays, developmental toxicity studies had shown no evidence of teratogenicity, and negative results had been obtained in mutagenicity tests. The Statement says, further, that the "Committee considered that the *available* data did not, in general, raise concerns regarding the health effects of CS spray itself". It concludes as follows: "The committee considered that further information needs to be obtained on the effect of CS spray in humans. In this regard it was noted that systematic studies in volunteers to investigate the toxicity of CS spray may present insurmountable difficulties. The Committee thus *recommended* that follow-up studies be carried out on individuals treated for the immediate effects of CS spray in order to obtain data on whether delayed effects occur. Information should also be collected in these studies relating to the previous medical history of the individuals involved, particularly with regard to respiratory or cardiovascular disease, or treatment with neuroleptic drugs."

Home Office Minister Charles Clarke tells reporters that the research supported previous findings that there was no reason to prevent the police using CS spray. His department would consider how to take forward the recommended research into long-term health effects.

23-24 September In Geneva, the Association for the Prevention of Torture convenes an international workshop on *Visits under International Law: Verification, Monitoring and Prevention* cosponsored by the International Commission of Jurists, the Quaker UN Office, and VERTIC. It takes place at the World Council of Churches and is chaired by Ambassador Johan Molander of Sweden. Its purpose is to explore and discuss the subject of visits and missions as emerging standards of preventive, monitoring and verification procedures in international law. Experiences in four fields of international law are examined for similarities and differences: human rights, environmental law, humanitarian law and disarmament.

24 September In Geneva, during the sixteenth session of the BWC Ad Hoc Group [see 19 Sep-8 Oct], a further [see 14 Jul] briefing for delegations is provided by the Quaker United Nations Office in conjunction with the University of Bradford Department of Peace Studies at which two further Bradford briefing papers on *Strengthening the Biological Weapons Convention* are presented: one by both editors of the series, Malcolm Dando and Graham Pearson of the University of Bradford, *The Emerging Protocol: An Integrated, Reliable and Effective Regime*, and the other by Philip van Dalen of TNO Prevention and Health in the Netherlands, *Outbreaks of Disease: Current European Reporting*. Also presented are five further 'evaluation papers' in the Bradford series, *The BTWC Protocol*. They are by Nicholas Sims of the London School of Economics, three of them jointly with Graham Pearson, and present evaluations of Articles XV-XXIII. The briefing, given by Pearson, Sims and van Dalen, is attended by 52 people from 29 delegations.

24 September In London, Macmillan publishes *Plague Wars: A True Story of Biological Warfare* by television journalists Tom Mangold and Jeff Goldberg. The book is mainly about biological-weapons programmes in Russia, Iraq and South Africa. It originates in a BBC television documentary [see 13

Oct 98]. It contains much anecdote. It is undocumented, but has pictures. [Note: The fact that this book lacks any citation of sources makes it indistinguishable from the work of fiction that in places it seems to be — notably the striking similarity between what is said on pages 80–82 and an analogous passage in *The Cobra Event*, which is a thriller by the American novelist Richard Preston. The publishers promise a US edition that will contain “73 pages of chapter notes”. The worth of the book and the information it presents may then become apparent.]

25–26 September In Geneva, the Pugwash Study Group on Implementation of the CBW Conventions holds its twelfth workshop [see 15–16 May], on *The BWC Protocol: Entering the Endgame*. Participating are 51 people from 18 countries.

26 September From Angola, allegations are once more being heard that government forces are using chemical weapons against UNITA rebels [see 9 Dec 98]. Nearly two weeks previously the government had launched a long-expected offensive against a rebel stronghold in the town of Bailondo. It had used its recently acquired Su-27 planes for heavy aerial bombardment backed by ground attack. UNITA spokesman Carlos Morgado now tells Portuguese radio that Bailondo has been attacked with napalm and phosphorus bombs as well as with chemical weapons and defoliants. A United Nations representative is later quoted as saying that the government denies having used chemical weapons.

27 September In Brussels the North Atlantic Council formally adopts *NATO Policy on Non-Lethal Weapons*, which is the product of some four years of alliance debate [see 24–28 Jan 94, 16 Apr 96 and 1 Sep 97]. Reporting this, *Defense News* says, with attribution to an unidentified NATO official, that “the statement refers to the limited applications of nonlethal weapons, which it defines as ‘explicitly designed and developed to incapacitate or repel personnel, with a low probability of fatal or permanent injury, or to disable equipment, with minimal undesired damage or impact to the environment’”. The policy has not yet been published but will be shortly, in the form of a two page statement.

28 September Azerbaijan Foreign Minister Tofiq Zulfugarov and US Deputy Defense Secretary John Hamre sign the first security-related agreement between their two countries, one on counterproliferation in CBW and nuclear weapons. Under the agreement, the US Defense Department in cooperation with the US Customs Service will, in the words of a Defense Department press release, “begin to train and equip Azerbaijani officials in techniques of preventing, deterring, and investigating incidents involving the proliferation of weapons of mass destruction and related materials”. The US Defense Department has concluded similar bilateral agreements throughout eastern and central Europe and countries of the former Soviet Union, under the authority of section 1424 of the FY97 National Defense Authorization Act.

28 September In the US Senate, the Committee on Foreign Relations conducts a hearing on *Disarray in the International Community over Facing Saddam Hussein*, taking evidence from former UNSCOM Executive Chairman Richard Butler [see 3 Aug]. The main burden of Ambassador Butler’s testimony is that the permanent members of the UN Security Council must “stand together in insisting to Iraq that it return to compliance with the law” as established by the Council’s own resolutions. In his prepared statement, he summarizes the behaviour of Iraq towards UNSCOM as follows: “Iraq’s actions may be summed

up as having three main characteristics. In the first instance, its declarations were never complete. From the beginning, Iraq embarked upon a policy of making false declarations. Secondly, Iraq divided its illegal weapons holdings into two parts — the portion it would reveal and the portion it decided to conceal. Thirdly, to mask its real weapons of mass destruction capability, Iraq also embarked on a program of unilateral destruction of a portion of its weapons. Finally, it refused to comply with the resolutions of the Security Council, in very many ways, so that the Commission was never able to exercise the rights spelled out for it in the resolutions of the Security Council. In practical terms, this has meant that the job of disarming Iraq, which should have taken about a year, is still not complete.” And he concludes: “[T]he refusal by Iraq to comply with the disarmament law has been the main source of the continuation of sanctions. The key to sanctions relief has always been disarmament. The Saddam Hussein regime has refused to pick up that key and turn it.”

28 September In San Francisco, during the 39th Interscience Conference on Antimicrobial Agents and Chemotherapy, there is a symposium on *Bioterrorist Threats: Potential Agents and Theoretical Preparedness*. A prominent theme, according to one account, is that the potential for bioterrorism is being taken seriously by US health officials but not by policy-makers.

29 September In the US House of Representatives, oversight hearings on the Defense Department’s force-wide Anthrax Vaccine Immunization Program (AVIP) [see 23 Jun and see also 5 Aug] continue [see 30 Jun] before the National Security, Veterans’ Affairs and International Relations Subcommittee of the Government Reform Committee. The inquiry now focuses on the impact of AVIP on personnel retention, readiness and morale in the National Guard and the armed forces reserves.

30 September In Tokyo District Court, Aum Shinrikyo cultist Masato Yokoyama is sentenced to death for his part in the release of sarin nerve-gas in the Tokyo subway in March 1995. It is the first such sentence to be passed on cultists convicted in the nerve gas trials. Yokoyama, whose lawyers say they will appeal, now joins the 52 death-row prisoners in Japan who currently await hanging.

30 September Sudanese Foreign Minister Mustafa Osman Ismail, addressing the UN General Assembly, renews his government’s call for the dispatch of a UN fact-finding mission to the site of the al-Shifa pharmaceuticals factory in Khartoum destroyed a year previously by US cruise missiles [see 19 Aug].

30 September Fort McClellan, Alabama, ceases to exist as an active US Army post. It had been the location of activities and facilities constituting the heart of the Army Chemical Corps. The Chemical School has now moved to Fort Leonard Wood [see 7 Mar]. The Alabama Army National Guard will remain. So will the Department of Justice Center for Domestic Preparedness, which had been established in 1997. This is where firefighters, police and paramedics now receive practical training in first-response to incidents involving toxic chemicals; about 2,000 of them will have been through the Center by the end of the year.

30 September In the US House of Representatives, further hearings [see 29 Sep] on the Defense Department’s force-wide Anthrax Vaccine Immunization Program (AVIP) take place before the Military Personnel Subcommittee of the Committee on Armed Services. The first witness, Deputy Defense Secretary John Hamre, opens his oral statement thus: “The

primary issue is, there are 10 countries in this world that have already taken the steps to put anthrax in a bomb or in a missile, and to launch it against our troops, for one purpose, to kill them. That's the reason that we have to inoculate our soldiers." (The prepared written testimony of Dr Hamre opens rather differently: "Currently, at least ten nation states and two terrorist groups are known to possess, or have in development, a biological warfare capability".) General Anthony Zinni, commander-in-chief of Central Command, says: "It would be almost impossible for us to conduct our war plans ... if [anthrax] were to be used on the battlefield".

30 September President Clinton signs Executive Order 13139, *Improving Health Protection of Military Personnel Participating in Particular Military Operations*. This has the effect of authorizing, under specified circumstances, the administration of vaccines that have not yet been approved by the Food and Drug Administration to members of the armed forces without their informed consent.

30 September The US Army Department, as required by Congress in legislation concerning technologies alternative to incineration for the US chemdemil programme, transmits its *Assembled Chemical Weapons Assessment Program: Supplemental Report to Congress* [see 25-28 Aug]. The report supplements those of December 1997 and December 1998, and includes a message with recommendations from the ACWA Dialogue [see 25-28 Aug]. Of the three alternative technologies considered, one — the Burns & Roe Startech Plasma Waste Converter — has been rejected for lack of maturity. The Parsons/Allied Signal system for neutralizing mustard gas followed by treatment in the Immobilized Cell Bioreactor is reported favourably for assembled mustard munitions. The General Atomics neutralization plus supercritical-water-oxidation technology is reported favourably for all assembled chemical weapons.

1 October In Japan, where the 101st Chemical Defence Battalion of the Ground Self-Defence Forces has just deployed to Tokai in response to the criticality accident at the Tokaimura uranium-processing plant, Japanese Defence Minister Hosei Norota speaks to reporters of the need to upgrade the protection of troops against radioactivity. The NBC budget plan [see 31 Aug] is being adjusted accordingly.

1 October In South Korea, where it is Armed Forces Day, President Kim Dae-jung says during a public address: "If war breaks out, North Korea is likely to use bio-chemical weapons of mass destruction in an attempt to inflict an initial major blow against us. We are dealing with [a] North Korea which is pouring all its resources into beefing up its military capability in the midst of a tragic famine and economic crisis. It is doing incomprehensible things under the absurd motto of 'Building a Great Nation of Strength and Prosperity'."

Shortly afterwards, a former head of the national intelligence service who is now an opposition National Assembly Representative, Kim Deok, tells reporters that the US Army has been vaccinating its forces stationed in Korea against smallpox, and that smallpox antibodies have been found in the blood of recently defecting North Korean soldiers. He also speaks of the dangers of anthrax-weapon attack, quoting casualty rates estimated in a World Health Organization report for such an attack on a large city.

The Defence Ministry, in its *1999-2000 White Paper* released on 12 October, states: "We have so far underestimated the North's chemical weapons capacities" and that a 1997 US-RoK study had increased the estimate of the

North Korean chemical-weapons stockpile from 1,000 tonnes to between 2,500 and 5,000 tonnes [see also Jan 99]. In a separate press release the Ministry says: "North Korea is also estimated to have at least ten different kinds of biological weapons". The White Paper says that the US and RoK governments will spend around \$750 million over the next five years to establish countermeasures against the North Korean CBW threat. Reporting this, Yonhap news agency also states that US Forces Korea "was chosen as a priority budget recipient in the United States' \$4.7 billion new nuclear strategy calling for the use of nuclear arms against countries that resort to chemical and biological warfare".

1 October The UN Security Council, during closed-door consultations, has before it a letter received from the Washington Office of the Patriotic Union of Kurdistan requesting UN investigation of an unexploded chemical weapon found in Halabja [see 2-5 Aug]. The weapon is described as 31 cm in diameter and "emitting a noxious odour". It had been found six days previously in the backyard of a home owned by a family that had lost twelve of its members during the 1988 gas-bombing of Halabja. The Council decides to ask the UN Secretariat for more information.

1-3 October In England, at Wiston House, there is a Wilton Park conference on *CBW Terrorism — Risks, Implications and Government Responses*, convened in coöperation with the Chemical and Biological Arms Control Institute (CBACI) in the United States. The participation is unusually broad, both geographically and professionally: 79 participants from 23 countries (Austria, Belgium, Canada, China, the Czech Republic, Denmark, Egypt, Finland, France, Germany, India, Israel, the Netherlands, Poland, Russia, Singapore, Suriname, Sweden, Switzerland, Turkey, Ukraine, the UK and the USA) and two intergovernmental organizations (NATO and OPCW). One of the presentations is from the Harvard Sussex Program.

1-8 October On US television, the late-night ABC News programme *Nightline* presents a five-part series, *Biowar*, on how a major American city copes with the unfolding consequences of a (hypothetical) anthrax attack on its subway system from which, in the scenario as it develops, some 50,000 people eventually die. Each part comprises a simulated news report followed by a panel discussion with experts. The author of the scenario is Kyle Olson [see 19 Mar 95], now a programme manager at Research Planning, Inc, which is a firm whose business includes the design and conduct of chembio terrorism response exercises for cities. The presenter, Ted Koppel, on a subsequent *Nightline*, discusses the threat of bioterrorism with Defense Secretary William Cohen, Health Secretary Donna Shalala and, from the National Security Council, Richard Clarke [see 6-7 Oct 98]. The portrayal of medical and public-health intervention as being ineffectual is subsequently criticized, notably by Dr D A Henderson [see 15 Aug], who observes that the assumption of a 3-7 day incubation period for anthrax had meant an unrealistically narrow window of opportunity for life-saving administration of antibiotics and vaccines: he notes that by Day 7 in the 1979 Sverdlovsk anthrax outbreak, 75 percent of the cases had yet to show the first signs of illness.

3-9 October In Brazil, the OPCW Technical Secretariat conducts a mock challenge inspection with the participation of the Brazilian National Authority and four observers from four states parties. The scenario has been developed by the Secretariat. A private Brazilian pharmaceutical company, Formil Quimica, has made available for the trial a small

commercial plant site in Jandira, 66 km from Sao Paulo. The exercise had begun on the morning of 1 October, with the transmission of the mock request for a challenge inspection to the Chairman of the OPCW Executive Council and the OPCW Director-General.

4 October In South Africa, the trial of Brigadier Dr Wouter Basson [see 3 Aug] on 64 charges of fraud, murder, conspiracy to murder, and possession of drugs opens in Pretoria High Court, Justice Hartzenberg presiding. The legal fees of the defendant are being covered by the state. According to newspaper reports, the prosecution has plans to call some 250 witnesses from around the world, and there is speculation that the trial may last for eighteen months or more. Two days previously Dr Basson, departing from previous practice, had given a three-hour interview to an American film maker. The opening is dominated by procedural matters as the defence advocates, Jaapp Cilliers and Tokkie Van Zyl, seek to quash certain of the charges, while the prosecution, led by Torie Pretorius and Anton Ackerman, seeks a one-week postponement. Accordingly, proceedings are adjourned for two days for consideration of technical arguments.

4 October In Berlin, the Federal German Government Commissioner for Disarmament and Arms Control, Ambassador Klaus Neubert, speaks to reporters about the progress now being made in the German-assisted chemdemil programme for destruction of Russian mustard gas and lewisite held in the Saratov region of Russia, at Gornyy [see 2 Apr 97 and 26 Mar]. In the words of an English translation distributed by ITAR-TASS, Commissioner Neubert says: "Such programmes, offered by American military experts to Moscow in the past, could not be translated into life above all due to the need to create an appropriate infrastructure for them. In this case, we have established excellent cooperation with Russian scientific quarters which developed unique technology with active support from the German side, including adequate scientific equipment. This technology helps to destroy mustard gas by hydrolysis and then to isolate arsenic from the volatile mass, decomposing gas by electricity [*sic*]." He says, further, that Germany will have invested DM 50 million in the programme by the end of 1999. ITAR-TASS reports: "According to information from the German Foreign Ministry, the German side could create infrastructure for life in Gornyy of 300 workers of a future production facility to destroy the gas, including housing, construction of water mains and power transmission lines".

4-5 October In The Hague the OPCW Protection Network convenes for its first meeting. Experts from 17 OPCW member states (Argentina, Australia, Austria, Belarus, Belgium, China, Croatia, Czech Republic, Finland, Italy, Poland, Russia, Slovakia, South Korea, Sweden, Switzerland and the USA) participate. They hear from the OPCW Technical Secretariat about the present status of its protection programmes (including the protection data bank, protection courses offered, protection information packages and the internet site), and they themselves offer advice, particularly on detection, personal and collective protection, contamination control and medical countermeasures.

4-8 October In Paris, the Australia Group meets for what its agreed press statement describes as "informal consultations ... on chemical and biological weapons (CBW) proliferation". Participating are 30 states (Argentina, Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy,

Japan, Luxembourg, the Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovakia, South Korea, Spain, Sweden, Switzerland, the UK and the USA) and the European Commission. Their agreed statement includes the following: "Participants discussed their national export licensing measures and procedures to ensure that they continue to be effective in preventing any contribution to chemical and biological weapons programs through the inadvertent supply of chemical precursors, biological agents and dual-use equipment and that they did not inhibit the trade in these items. They reaffirmed that their national chemical and biological export licensing measures were directed solely at preventing CBW proliferation, and were designed not to hamper legitimate trade. [...] Participants encouraged all countries that are not participants in the Australia Group to implement similar national measures to prevent the spread of chemical and biological weapons. They expressed their willingness, on a national basis, to continue assisting others in implementing such measures and in improving the effectiveness of their export control mechanisms. [...] In line with [Chemical Weapons] Convention obligations, participants committed to keep under review their respective national export licensing policies to ensure that they promote the object and purpose of the CWC, are applied fairly and remain fully consistent with it."

4-9 October In Pretoria, the trial of Wouter Basson [see 4 Oct] progresses through its first week. The following summary has been provided from the University of Cape Town by its Centre for Conflict Resolution:

"The trial failed to get underway this week and Basson has not yet been asked to plead. The defence team has raised a number of objections to the charges. In the first instance the defence has argued that the charges relating to any activities in Namibia should be dropped on the basis that Basson qualifies for a general amnesty that was promulgated on 7 June 1989, on the eve of independence by the then South African Administrator General. The amnesty protects all South African police and military members from criminal prosecution related to any operational activity in Namibia before that date [but see 11 May 90]. The prosecution will put its arguments next week.

"The defence has also objected to the conspiracy charges [see 24 Mar], arguing that it is virtually unprecedented for a person to be charged with conspiracy to murder when the murder took place in a country other than that in which he is standing trial. Once again this will be argued by the prosecution next week. It is worth noting however that there is a precedent in South Africa for this, set in the case against former policeman, Eugene De Kock [see 19 Apr].

"The defence has also raised objections to the bail application transcript [see 1 Dec 97 and 24 Mar] being used in the trial. They have argued that an interrogation of Basson by the Office for Serious Economic Offences, conducted after his arrest in 1997 [see 29 Jan 97], should not be admissible as evidence.

"It is unlikely that Basson will be asked to plead until the matter of the relevance of charges has been ruled on. It is expected that that may happen late next week. Should the defence win its arguments on both the amnesty and the admissibility of the application hearing, the repercussions would be that the charge sheet would have to be revised and a much weaker set of charges will emerge. Should the bail application be ruled inadmissible, it will make the state's case on the fraud charges far more difficult to argue and they will not have a basis on which to question the version of the accused."

5 October In Moscow, Chechen presidential representative Sharip Tokhayevich Yusupov arrives from Grozny and says at

a press conference three days later that Russian Federation forces have been using chemical weapons in the mountainous border region between Georgia and Chechnya: "I have heard there have been cases when cattle died instantly after these strikes". He says also that a variety of other types of weapon are in use, including "needle bombs, vacuum bombs and thermal shells". He recalls the suspicion that federal forces had used chemical weapons in 1994–96, during their last invasion of Chechnya [see 22 Jul 96 and 12 Mar 97].

After the bomb outrages in Russia the previous month, *Komsomolskaya Pravda* had published a front-page article advocating the use of CBW weapons: "It is necessary to put the question before Chechnya — either they cease all military activity on Russian territory or face the physical destruction of the whole republic with air raids, bacterial weapons, psychotropic nerve gas, napalm, everything that our once-strong army has at its disposal" [see also 28 Jul Grozny].

5 October From South Africa *No Future without Forgiveness* is published by Doubleday, a memoir of the Truth and Reconciliation Commission by Archbishop Desmond Tutu. In it, he describes the CBW programme as the "most diabolical aspect of apartheid", adding: "Thank God they were so incompetent. What was so shattering for me was that it had all been so scientific, so calculated, so clinical. We had listened to gruesome details in evidence that had come before the commission before then." Then he lists some of the substances and projects of the CBW programme — "Cholera, botulism, anthrax, chemical poisoning and the production of huge supplies of mandrax, Ecstasy and other drugs of abuse" — continuing: "We wonder now that there is such a huge supply of drugs in the coloured community of the Cape Flats. Is it an unfortunate social phenomenon or does it relate to part of a chemical and biological warfare programme to undermine the morale of that community?"

5 October In London, the British Medical Association hosts a small conference on *Wounds, Weapons and the Doctor*, its head of health policy, Dr Vivienne Nathanson, telling reporters that the BMA is keen to be a campaigning force to draw attention to the effects of new weapons: "We can make sure we are there and ready to play our part in the debates. Unless we do, nobody will give an informed view." The conference hears presentations from the International Committee of the Red Cross, from the Quaker UN Office in Geneva, and, on potential hostile applications of biotechnology [see 21 Jan], Malcolm Dando of Bradford University. The London *Guardian* reports next day that the BMA is now proposing that weapons should be banned where they are designed to cause (a) specific disease, abnormal physiological state or permanent disability, including so-called 'non lethal' weapons; (b) battlefield mortality of more than 25 percent or hospital mortality of more than 5 percent; (c) Red Cross classified grade 3 wounds — those, such as exploding bullets, which inflict large wounds without being targeted against a specific part of the body; and (d) effects for which there is no recognised treatment.

5 October Iranian Deputy Foreign Minister Mohammad Javad Zarif speaks at a seminar at Columbia University in New York City on *Iran's Views concerning Chemical Weapons*. In his remarks he is critical of the role of Western governments and the silence of the UN Security Council during the extensive use of chemical weapons against his country by Iraq. He says that chemical weapons have no place in Iranian military doctrine; rather than valuing the weapons for their power as a source of security, Iran instead plays an active role in the implementation of the Chemical Weapons Convention, of

which it was one of the original signatories, and with which its compliance has recently been tested by OPCW inspectors. He observes that the US government, nevertheless, attempts to use the issue of chemical weapons as a political lever against Iran, thereby inducing the public opinion that Iran intends to access chemical arms. He says, too, that the West's selective approach has led to the development and proliferation of these weapons. He advocates a boosting of peaceful cooperation among CWC states-parties, and of their commitment to the treaty, as the only way to prevent production and duplication of chemical weapons.

5 October President Clinton signs into US public law the *National Defense Authorization Act for Fiscal Year 2000*. In doing so he issues a lengthy statement deploring specific provisions of the legislation and directing his administration to treat certain of them as purely "advisory". The statement also urges the Congress "to reverse its current ban on chemical weapons destruction assistance to Russia" [see 6 Aug].

5 October The US Army Department announces the impending departure from office, on 31 October, of Dr Theodore Procriv, who is currently Deputy Assistant to the Secretary of the Army for Chemical Demilitarization. This post is in the Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), Paul Hoeper, who says in a press release: "All of us that have worked with Dr Procriv during the past year appreciate his efforts and admire his superb leadership in the chemical weapons destruction program". Dr Procriv will be taking up a position in the private sector with Versar, Inc.

5–6 October In Washington, Jane's Information Group convenes a conference on *Chem-Bio and Unconventional Threats: Technology Needs and the Future*. The organizers present its purpose in the following terms: "As the threat of chemical, biological and other unconventional incidents grows on the local, state and federal levels, how you can be prepared is a critical issue. Yet how do you make sense of the complexities of buying, selling and using the proper technology and equipment you need to be protected. No doubt, whether your business is research, manufacturing or community protection, the gaps between each are wide and making sense of them is difficult. [The conference] will close this gap [sic] by answering the questions: How and where do I spend my money? Who is buying? What technology and equipment is required for me to meet the challenge of protecting my city?"

5–7 October In the United Kingdom, the Royal Military College of Science at Shrivenham hosts its third *International NBC Defence Symposium*.

6 October The *American Journal of Psychiatry* publishes a study from the US National Naval Medical Center in Bethesda on psychiatric aspects of chemical or biological terrorism. Its abstract is as follows: "OBJECTIVE: This article highlights the mental health consequences of a domestic terrorist incident involving chemical or biological weapons. METHOD: The author [Cleto DiGiovanni, Jr] reviews the literature on the neuropsychiatric effects of selected chemical and biological weapon agents, on the psychological sequelae of mass disasters, and on approaches to crisis intervention. RESULTS: Disturbances of behavior, affect, and cognition can result directly from the pharmacological actions of some chemical and biological weapon agents. In addition, an incident involving these agents can have considerable psychological effects on individuals and the community. In either case, some

disorders are acute and others are prolonged or delayed in onset. Effective therapeutic intervention involves a broad range of clinical, social, and administrative actions. CONCLUSIONS: Psychiatrists have an important role in the management of a chemical or biological terrorist incident and, along with their other medical colleagues, should train and prepare for it.”

6–7 October In Russia, the authorities of Penza Oblast join with Green Cross Russia in organizing the *Fifth Russian Public Hearing on Chemical Weapons Destruction* [see 26–27 May 98] in cooperation with Global Green USA and Green Cross Switzerland. The meeting brings together Russian federal, regional and local officials, military authorities, non-governmental organizations and interested members of the public for open and informal consideration of the chemdemil plans for the Leonidovka chemical weapons stockpile [see 26 Sep 94] as well as the status of the overall Federation Chemical Weapons Destruction Programme [see 15 Jun Moscow]. The context is described as follows by the organizers: “Since the approval of the Russian Chemical Weapons Destruction Law in 1996 and the Russian ratification of the Chemical Weapons Convention in 1997, the planning and initial construction of the destruction facilities in Gorny and Shchuch’ye have well progressed. The recent discussions [see 6 Aug US Congress] on the financing of the Shchuch’ye destruction facility however have stalled progress. Critical issues over the last years, putting the success of the Russian Chemical Weapons Destruction Programme at stake, have been public concerns on health and safety issues, the construction of social infrastructure in the stockpile communities, and the missing programme funding. In the case of the Penza Oblast, the abandoned open pit burning site threatening the regional drinking water reserve [see 19 Aug 97], is another central issue.” The aim of the hearing is to build “mutual understanding on next steps needed between the public, environmental organizations, authorities, and the military, and at promoting practical activities to solve the complex and interrelated environmental, health, economical, technical, social, and legal issues”. There is a special panel to address the question of non-budget financing of social infrastructure construction [see also 4 Oct Berlin].

7 October In Norfolk, Virginia, the Chairman of the US Joint Chiefs of Staff, General Hugh Shelton, joins Defense Secretary William Cohen in ceremonies establishing a new US Joint Forces Command and retiring the US Atlantic Command. Incorporated within the new command is the Joint Task Force for Civil Support that is charged with planning and organising the military contribution to national preparedness for WMD incidents within the United States.

8 October In Iraq, UK and US air forces are continuing to enforce the northern and southern no-fly-zones [see 14 Jul]. Since December, according to the *New York Times* quoting American officials, UK/US patrols have flown nearly 27,000 sorties dropping 1,650 bombs on more than 385 targets. The targets have included 150 anti-aircraft artillery batteries, 30 radar or communication centres and 22 buildings used as command centres. Concrete bombs are said sometimes to have been used in order to reduce “collateral damage”: 2000-pound laser-guided munitions filled with concrete instead of high-explosive.

8 October In Pretoria, where he is attending the trial of Wouter Basson [see 4–9 Oct], former South African Defence Force chief General Constand Viljoen speaks as follows on

South African radio about his decision to authorize Project Coast in the early 1980s: “At that stage the ANC had made a decision to take the war to the townships, and that created a real possibility of more actions such as we had with the Sharpeville situation, where angry mobs and crowds would come forward. Now my role was to put to my scientists a question as to whether it would not be possible to have some other form of weapon, for example, a type of gas that will make people friendly.”

8 October The UN Security Council receives its eighth six-monthly consolidated report [see 9 Apr] on the work of UNSCOM. Throughout the period covered by the report, 12 April to 11 October 1999, UNSCOM continued to be excluded from Iraq. Its activities fell into three main categories, described in the report as follows: “(a) Continuing analysis of data in the Commission’s possession. Since 1991, the Commission has accumulated a large store of data from its inspections, Iraq’s declarations and other sources. New information also continues to be received. Commission staff are organizing, analysing and computerizing these data to make them more readily usable. This work has not changed the technical assessments reported previously to the Security Council; (b) Detailed design and planning for renewed and strengthened ongoing monitoring and verification. Drawing upon its previous experience in Iraq, the work of the panel on disarmament and monitoring established by the Security Council early in 1999, and taking into account developments since December 1998, the Commission’s staff is preparing a paper with detailed recommendations for a reconstituted system, including steps and timelines for its implementation. The objective is to advance the planning as much as possible for use when such monitoring is established; (c) Export/import data collection and analysis. The export/import unit has continued to receive notifications from Governments with respect to the supply to Iraq of dual-use materials. The data are being registered in the export/import database and analysed to support future monitoring.” The report records that the UNSCOM field office in Bahrain is being held in caretaker status and that, in July, it had been moved to a new location, in Manama, at the request of Bahraini authorities.

The report also includes this: “The Commission notes with regret the recent death of Jack Ooms of the Netherlands [see 6 Sep], who served as a Commissioner since its inception in 1991. He assisted in the establishment of the Commission’s chemical monitoring activity, the certification of the chemical laboratory in Baghdad and the programme to destroy large quantities of Iraq’s declared stocks of chemical warfare agents. His experience and dedication played a key role in the work of the Commission and in other disarmament efforts around the world.”

8 October In Tyson’s Corner, Virginia, there is a conference on *Terrorism 2000: Trends and Forecast* organised by the Association of Counter-terrorism and Security Professionals [see 19 Jan]. The opening speaker is Robert Blitzer [see 5 Jul], former head of the FBI domestic terrorism and counterterrorism planning section. During his remarks he speaks of chembio terrorism: “I think there is a general feeling that in a chemical attack there is a fairly robust ability to deal with them. Most states and major cities have very good HAZMAT capabilities, and that’s what it really is. [...] With respect to bio, it’s a totally different equation. It’s much more insidious. If there is a successful bio attack it will be days before you realise it, and then it really becomes a medical emergency. [...] I think it’s very difficult to (a) evolve a good bio and (b) disseminate it. I just think the technology in such, in spite of what I’ve read, in

talking to experts in the biowarfare area, it's not as easy as it seems. It's much more difficult to effectively disseminate over a large population a bio. Frankly, I think the terrorists are afraid of it. You really have to have some pretty doggone good microbiologists who know what they're doing in order to develop this kind of capability. Even talking to the military, which I certainly did many times, there's a lot of sophisticated preparation that goes into weaponizing something. It's just not that easy. Can it be done? Yes, it can be done. Could it be done soon? I don't think so. I think we're probably looking several years out before anybody is capable of doing that in the terrorist world. I'll hedge a little bit on that because certainly some of the state sponsors [of terrorism] have had fairly robust chem-bio, and particularly programs to develop bio and to weaponize it. If there were a decision made in one of those countries to provide that kind of technology to a terrorist organization, it could be done." [See also 7 Sep]

Another conference speaker is Steven Emerson, who addresses the capabilities of different terrorist groups, to two of which [see also 30 Sep US House] he ascribes current efforts to acquire CBW weapons: al-Qaida, led by Osama bin Laden, and Hamas, the Islamic Resistance Movement. He states that, although the recent New York grand jury indictment of bin Laden [see 4 Nov 98] referred to efforts since 1993 to acquire chemical weapons, US authorities did not in fact have intelligence of this until 1998. He adds: "It is not believed yet that he has acquired [chemical weapons], although he probably has the precursors on some of the chemical agents at this point". On Hamas he says: "Evidence from Israeli arrests of Hamas terrorists shows that Hamas has been thinking about and would like to use biological or chemical weapons against the Israelis. That also has stimulated a new Israeli effort to institute similar types of programs like we have in the United States for inoculations."

9 October In Moscow, *Krasnaya Zvezda* publishes the latest Russian Defence Ministry draft of the projected new *Military Doctrine of the Russian Federation*, which is said to be scheduled for discussion by the Security Council of the Russian Federation in late November. Among many novelties as compared with the 1993 *Doctrine* [see 2 Nov 93] the draft states: "The Russian Federation retains for itself the right to use nuclear weapons in response to the use of nuclear and other kinds of weapons of mass destruction against it and its allies, and in response to wide-scale aggression using conventional weapons in situations critical to the national security of the Russian Federation and its allies."

11 October China, through a statement to the UN General Assembly First Committee by its Deputy Permanent Representative to the United Nations, Shen Guofang, says that it supports the efforts to strengthen the BWC and to establish for it a fair, reasonable, appropriate and feasible verification mechanism. "To this end, it is imperative that the balance between rights and obligations of states parties be taken into full account so as to prevent the abusive use of verification and to protect the legitimate security and economic interests of all states parties. In the meantime, it is also very important to enhance international cooperation and exchange in the field of biology. It remains our objective to conclude negotiations of the protocol before the Fifth Review Conference of the convention. The key to progress in negotiations lies in full accommodation of each other's legitimate concerns by all parties. To place undue emphasis on speed and table the so-called 'clean text' prematurely while there are still major disputes among parties can only be counter-productive. China, for its part, wishes to continue its earnest negotiations on the

basis of the existing rolling text in a bid to help bring about a good protocol acceptable to all."

11 October–12 November At the UN General Assembly in New York, the First Committee (Disarmament and International Security) meets for its general debate, its thematic discussion on item subjects, and its consideration and action on draft resolutions arising out of Assembly agenda items 64–85.

12 October In Pretoria High Court, where Wouter Basson is on trial [see 8 Oct], the presiding judge gives his ruling on the technical matters raised by the defence [see 4–9 Oct] and adjourns the hearing until 25 October. The following report has been provided from the University of Cape Town by its Centre for Conflict Resolution:

"In a 90-minute judgement last Tuesday, Judge Willie Hartzenberg ruled that six of the eight conspiracy to murder charges against Wouter Basson had to be withdrawn by the State. His ruling is based on his interpretation of the relevant clause of the Criminal Procedure Act which does not allow prosecution in a South African court for crimes committed on foreign soil.

"Hartzenberg also found that, in any event, Basson could not be prosecuted for crimes committed in Namibia, since the amnesty granted in June 1989 (and extended in February 1990 to specifically cover all members of the SA and SWA security forces) had been recognised by the present Namibian government and thus indemnified Basson from prosecution in South Africa 'for crimes which Namibia does not wish to pursue'.

"Despite the fact that the same prosecution team successfully charged Eugene de Kock in 1995 with conspiracy to murder for crimes committed outside the country (attempted murder of Dirk Coetzee, murder of Vlakplaas operative Brian Nqulunga in what was then Bophuthatswana) Hartzenberg found that this had been tantamount to the state 'creating a new crime'.

"Since De Kock's defence team never challenged the charges and the matter was never argued, the Basson case ruling is the first in SA on this matter.

"The charges that have been withdrawn include Charge 31, involving a conspiracy to murder enemies of the state and own security force members who present a security risk. Actions emanating from this policy include the poisoning of 200 Swapo prisoners of war in a detention camp and the murder of five Swapo members at Fort Rev, Ondangwa — the only murder charges which actually placed Basson at the scene. Basson will also not be charged for other murders which took place outside the borders of South Africa including those of Gibson Mondlane in Mozambique and Enoch (Knox) Dlamini in Swaziland. Also not to be heard is charge 61 involving a plot by an SADF hitsquad (the CCB [Civil Co-operation Bureau]) to contaminate the water of a SWAPO transit camp with cholera shortly before the Namibian elections.

"Hartzenberg upheld the State right to prosecute Basson on Charge 45 — death of Swapo member who was fed poisoned 'jungle juice' in Owamboland but flown to 1 Military Hospital for treatment on the grounds that he had died within the court's jurisdiction.

"The fate of Charge 59 — hanging of baboon foetus in Archbishop Desmond Tutu's garden — is still undecided. The judge ruled that as presently formulated, it does not constitute the crime of intimidation, since no actual threat was issued. The state has the opportunity to reformulate the charge, or amend it. If this cannot be done, it, too, must be dropped.

"On Charge 63, also challenged by the defence, the judge made the extraordinary ruling (not requested by the defence)

that while the charge may stand on the grounds that some of the resulting actions took place in SA (murders at Zeerust, etc) the defence has the right to object to all and any evidence that may be presented in relation to the six withdrawn charges.

"This could pose a serious problem for the state, since without being able to present a full account of the CCB's policy, methods of operation, etc, it could be hard-pressed to convince the court of Basson's guilt in regard to the remaining murder/attempted murder charges. Lack of this evidence would effectively remove the motives for the remaining 14 murders as well.

"The state could face a further major obstacle in that at least some of the secret witnesses lined up to testify in return for indemnity from prosecution may now decide, in the light of the fact that they are implicated only in the six withdrawn charges and/or are covered by the Namibia amnesty, not to give evidence after all.

"It would appear that the prosecution has a limited right to appeal against the judgement which is likely to mean that the trial will go ahead with the exclusions as ruled by the Judge.

"Even though Basson has still not been asked to plead and his trial has thus not formally begun, Hartzenberg granted the defence's request that his bail conditions be relaxed for the duration of the trial. He thus no longer has to report to a police station once a week. The state did not oppose the request."

12 October In the US Senate the Intelligence Committee holds a closed hearing on the Al-Shifa situation [see 30 Sep Sudan] in which it is briefed by CIA Director George Tenet. Chairman Richard Shelby subsequently tells reporters that he continues to question the quality of the evidence that led to the US cruise-missile attack on the Sudanese pharmaceutical factory: "I'm still troubled by the timing of the response by the US and I'm also concerned still about the standard of the evidence used". However, two other committee members — Senator Robert Kerrey and Senator John Chafee — say unequivocally that the attack was justified.

Speaking the following week at Georgetown University, Director Tenet says that "the case is as compelling today as the day we made the decision" to attack. The *New York Times* shortly afterwards states that, during the decision-making process that preceded the attack, Mr Tenet had reportedly "cautioned Mr Clinton's top advisers that while he believed that the evidence connecting Mr bin Laden to the factory was strong, it was less than iron clad". The *Times* report continues: "He warned that the link between Mr bin Laden and the factory could be 'drawn only indirectly and by inference', according to notes taken by a participant. The plant's involvement with chemical weapons, Mr Tenet told his colleagues, was more certain, confirmed by a soil sample from near the site that contained an ingredient of nerve gas." Also disclosed in the *Times* report is the sceptical attitude of the State Department Bureau of Intelligence and Research towards the dominant CIA assessment of the available intelligence. INR had concluded that the evidence linking Al-Shifa to bin Laden and chemical weapons was weak, and had reported as much to its masters within the State Department. "Some officials said", so the *Times* writes in what is a long Special Report on the affair, "the President's chief advisers concluded that the risks of hitting the wrong target were far outweighed by the possibility that the plant was making chemical weapons for a terrorist eager to use them".

One further item related by the *Times* is that the crucial soil sample [see 24 Aug 98] had apparently been taken, not on Al-Shifa premises, but some 20 metres away, across an access road. The sampling had been done in December 1997, about

four months before Mr Saleh Idris [see 10 Aug] purchased the factory.

12 October In the US House of Representatives, the Committee on Government Reform conducts a hearing on the *Department of Defense Anthrax Vaccination Program* [see also 30 Sep US House]. This builds upon the series of oversight hearings on the Anthrax Vaccine Immunization Program (AVIP) conducted by the Committee's Subcommittee on National Security, Veterans' Affairs and International Relations [see 29 Sep] chaired by Representative Christopher Shays. Referring to these prior hearings, Committee Chairman Dan Burton says that today's hearing is to examine the overall picture: "We're looking into the role of vaccines as a defense mechanism for biological warfare. Is it viable and appropriate to use vaccines as a defense mechanism? Will it be possible and practical to develop vaccines to protect against all known and potential biological threats?" He expresses scepticism about the dismissal by the Defense Department of there being any serious cause for concern about the safety and effectiveness of AVIP. He cites distressing accounts received from armed-forces personnel who have felt obliged to resign from public service rather than accept compulsory injections. Representative Shays, in his opening remarks, likens BW vaccine defences to "constructing a medical Maginot Line".

Testimony is taken, sometimes vigorously, from the Assistant Defense Secretary for Health Affairs, Dr Sue Bailey; from the Special Assistant to the Defense Secretary for biological warfare, Maj-Gen Randall West; the director of the Defense Department AVIP Agency, Lt-Col Randy Randolph; from the medical director of the State Department Office of Medical Services, Dr Cedric Dumont; and from the director of the FDA Center for Biologics, Evaluation and Research, Dr Kathryn Zoon. Later, a second panel of witnesses is heard: Admiral William Crowe, former Chairman of the Joint Chiefs of Staff and now associated commercially with AVIP [see 7 Jul 98]; the director of GAO Special Studies and Evaluation, Kwai-Cheung Chang, who has long been studying AVIP issues at the request of members of Congress; Dr Jack Melling, former director of the Salk Institute Biologicals facility in Pennsylvania, and before that a senior figure in British defence vaccine work; Milton Leitenberg of the University of Maryland Center for International and Security Studies, who has provided an assessment of the biological-weapons threat to the United States; Dr Bart Classen, a physician and immunologist critical of the AVIP vaccine, with which he has worked for the past eight years; Major Sonnie Bates, an active-duty pilot at Dover Air Force Base who testifies about eleven people in his squadron who appear to have suffered serious adverse reaction to the vaccine; Major Thomas Rempfer, an active-duty fighter pilot, who gives evidence on reasons for the adverse impact of AVIP on retention of armed-forces personnel; and Dr Neal Halsey of the Johns Hopkins University School of Public Health, testifying on the broad issue of vaccine safety.

13 October In Russia, the Federation Council is told by the governor of the Kurgan region, Oleg Bogomolov, of a potentially "catastrophic situation" arising from failure properly to implement the federal programme for destruction of chemical weapons. This is detailed in a paper submitted to the Federation Government Chairman by Bogomolov and the governors of the five other regions where chemical-weapons stocks currently await destruction. Only a small percentage of the funding needed has in fact been allocated to the programme from the federal budget. This is why, when they meet with the command of the Russian Defence Ministry RKhB Protection Troops, the governors are told that Russia will not be

able to begin the destruction of chemical weapons on the schedule required under the CWC. They propose that R3 billion now be allocated to the chemdemil programme in the draft budget for the year 2000.

13 October The US Senate votes 51–48 not to approve ratification of the Comprehensive Test Ban Treaty.

13 October From Fremont, California, Abgenix Inc [see 13 Jul] announces an expansion of its collaboration with the US Army Medical Research Institute of Infectious Diseases in the development of antibody therapies against BW agents. USAMRIID will now be using the company's proprietary technology to make fully human monoclonal antibodies that will be tested for their ability to protect against poxvirus infections, including smallpox. Such antibody therapy could be useful in treating immune-suppressed individuals or patients who have an adverse reaction to the existing smallpox vaccine.

14 October Sudan television carries a report that a spokesman for the Secretary-General of the United Nations has issued a statement indicating that the laboratory tests in Atlanta [see 4 Aug] had showed no evidence of exposure to chemicals in the cases of the World Food Programme workers whose health had reportedly been adversely affected after they had visited bomb-craters in the southern Sudanese towns of Lainya and Kaaya [see 23 Jul and 19 Aug].

14 October Cuban allegations of US biological warfare against Cuban people, animals and crops — 12 such episodes in all, during 1964–97 — are the subject of detailed examination in a review published in *Critical Reviews in Microbiology* by Raymond Zilinskas, senior scientist in residence at the Washington office of the Monterey Institute for International Studies. Devoting 54 pages and 126 literature-citations to his study, the author concludes that the “information and analysis provided here on 12 outbreaks of disease or infestation in Cuba makes clear that the most likely explanation for all of them is that they were caused by nature or were accidentally brought about by human activity such as trade and commerce. None of them was likely to have resulted from biological attack by the US.” He offers several explanations for the Cuban accusations, which he expects to see continued in the future, and observes: “There is a positive aspect to this otherwise sorry history of untrue allegations by the Cuban government — the behavior of the Cuban scientific community has been honorable and commendable. With one exception, Cuban scientists have declined to join politically motivated allegations of scientific misconduct.”

15 October The UN Security Council adopts a resolution that would, in effect, impose sanctions on Afghanistan unless, within a month, “the Afghan faction known as the Taliban” turns over Osama bin Laden [see 8 Oct] “to appropriate authorities in a country where he has been indicted, or to appropriate authorities in a country where he will be returned to such a country, or to appropriate authorities in a country where he will be arrested and effectively brought to justice”.

17–21 October In the Czech Republic, in close cooperation with military and civil institutions of the government, the OPCW Technical Secretariat conducts a full-scale exercise of its capacity for responding to a request for an investigation of alleged use (IAU) of chemical weapons. The exercise is conducted at Vyskov Military Academy and in Dedice military area. The exercise scenario is that of a CW attack by an unknown state, simulants being used to represent CW agents.

The IAU team comprises 23 inspectors and an expert in toxicology, and there are ten observers from CWC states parties. The exercise is judged a great success.

18–20 October In Dhahran, at the Intermediate Military Health Academy, Saudi Arabia hosts the first Gulf Cooperation Council symposium on *Protection against NBC Warfare*. Participating are experts and firms from Canada, the Czech Republic, France, Germany, the Netherlands, Russia, the UK and the USA, as well as the Gulf states.

19 October The UN Security Council unanimously adopts resolution 1269 (1999) condemning “all acts of terrorism, irrespective of motive, wherever and by whomever committed”. This follows a special debate on international terrorism initiated by Russia. The resolution calls on states to implement fully the antiterrorist conventions to which they are parties and to cooperate in preventing and suppressing terrorism. It also requests the Secretary-General to pay special attention in his reports to the General Assembly to “the need to prevent and fight the threat to international peace and security as a result of terrorist activities”.

19 October At the UN General Assembly, OPCW Director-General José Bustani is scheduled to address the First Committee but decides against doing so after his request to speak from the podium rather than from his observer seat had been rejected. His prepared statement, now modified to reflect the changed circumstances of its delivery, is later posted on the OPCW website and also made available as a Secretariat note. [For details of the statement, see *Progress in The Hague* above.]

19 October In Washington, the US Defense Department releases another volume in the series *A Review of the Scientific Literature as it Pertains to Gulf War Illnesses* that had been commissioned from the Rand Corporation [see 15 Apr]. It is on pyridostigmine bromide, the “pre-treatment” or prophylactic drug used against nerve-gas poisoning that was issued during the Gulf War, and which has since been suspected of association with “Gulf War syndrome”. Both in the volume and to a press conference, the author of the study, Beatrice Golomb, presents two major conclusions. One calls into question the effectiveness of PB in protecting people against nerve gas. The other she states as follows: “PB cannot be ruled out as a possible contributor to the development of unexplained or undiagnosed illness in some PGW [Persian Gulf War] veterans. Of the hypotheses considered, the evidence permits the rejection of only one — bromism. The others remain scientifically viable. By their nature, these hypotheses are not mutually incompatible.” Army Under Secretary Bernard Rostker, whose previous job had been Defense Department Special Assistant for Gulf War Illnesses, tells reporters that this particular Rand volume was unique “because, for the first time, Rand did not reach a conclusion that the issue under study was not likely a cause of Gulf War illness”. This is rather widely reported in the press as grounds for believing that PB may indeed have caused “Gulf War syndrome”.

19–27 October In Spain, at Madrid and Huelva, the OPCW Technical Secretariat, in cooperation with the Spanish CWC National Authority, conducts an advanced course for personnel involved in implementation of the CWC in Latin American and Caribbean countries.

20 October The Netherlands Foreign Ministry responds in the Second Chamber of the States-General to a question from the Foreign Affairs Committee about the handling of allegations of the possession or use of chemical weapons by countries that are not party to the CWC. The question, tabled on 17 September, had mentioned allegations of this type concerning Yugoslavia, Sudan and Congo. In regard to the Sudanese allegations [see 19 Aug], the response refers to exchanges of views within the European Union, and also to contacts with the UN Secretariat, during which the possibility of Sudan requesting an OPCW inspection was raised; Sudan, however, had denied possession or use of chemical weapons, and saw no need to request an OPCW inspection. As to the Congolese allegation, the Ministry had no knowledge of reports of CW use in Congo.

20 October The UK Defence Ministry releases the *Report on the Long Term Neurotoxicity of the Anticholinesterases* recently produced by a working party of the Defence Scientific Advisory Council. A Ministry response is also released. The Report says that there is little evidence that the prophylactic use of carbamates (such as the pyridostigmine bromide used in nerve-agent pretreatment) is associated with any long-term adverse health effects, although it does say that this should be further explored. The Ministry response notes that work is under way at CBD Porton Down to determine whether these compounds might have an effect on the immune system. Asked specifically about the Rand Corporation literature-review on PB [see 19 Oct] in Parliament a week later, the Ministry says: "MOD is currently funding research into possible interactions between PB and the vaccines given to UK troops in the Gulf (initial results show no untoward health effects). We are also conducting a neuromuscular symptoms study (one of the areas specifically mentioned in the RAND paper). The MOD welcomes new proposals for research into Gulf veterans' illnesses and would look favourably on any proposals recommended by the Medical Research Council who act as our independent assessors and advisers."

20 October US Senior Advisor for Arms Control and International Security John Holum [see 28 Jun], addressing the First Committee of the UN General Assembly, says: "[I]t would be a profound error to conclude that my country's dedication to nonproliferation and arms control has flagged or, even worse, to take the Senate vote on CTBT ratification [see 13 Oct] as reason for anyone else to stand back from that cause. For, after all, each of us takes nonproliferation and arms control steps not as a favor to someone else, or as a lever for other ends, but a matter of vital self-interest."

Later in his address he speaks of the BWC, which he describes as "a linchpin of the global nonproliferation regime", continuing: "We have been laboring in the Geneva Ad Hoc Group for four years. The parameters of the Protocol to strengthen the Convention are well established. Countries' positions have been discussed and debated at length, and their bottom lines — or 'red lines' — have been made clear. The United States strongly believes the time is now to settle remaining core issues. The United States recognises that the multilateral arms control calendar is full and that staff resources for many countries will be stretched. But strengthening the BWC is far too important; we must not let this effort falter, especially when we are so close to finishing our work. I urge all states to agree to schedule remaining sessions early in 2000, so that the negotiations can be completed next year."

20 October In the US House of Representatives, two subcommittees of the Armed Services Committee hold a joint

hearing on the threat to US forces posed by the proliferation of CBW weapons. Military and administration witnesses are preceded by Ken Alibek [see 15 Aug], now Chief Scientist at Hadron Inc, and Norman Rabkin, director of National Security Preparedness Issues in the General Accounting Office. Preceding all of them has been a closed-session briefing from the intelligence community, which has evidently stimulated the questioning of Dr Alibek. His prepared statement had added rather little to the evidence about the USSR biological-weapons programme that he had given in earlier Congressional testimony. His oral remarks, however, present some new information. For example, the two-ton BW-agent spraytank that had been developed for the Il-28 bomber was intended to be carried in pairs. Again, the standard agent-formulations for dry-fill BW munitions were such that the prescribed application densities, depending on meteorological and other conditions, were in the range 0.2–0.8 kg/km² for Marburg virus and 3–5 kg/km² for anthrax or plague bacteria [see also 15 Aug]. Further, he ventures the opinion that Russia has retained 10–20 percent of the former USSR capability for biological-weapons research and development, but he does not explain the basis for his estimate.

20 October In the US House of Representatives, there is an oversight hearing on *Dangers of Domestic Terrorist Attacks Using Chemical or Biological Weapons* before the National Security, Veterans' Affairs and International Relations Subcommittee of the Government Reform Committee. Chairman Christopher Shays describes it as the fifth of a series of hearings on federal efforts to combat terrorism at home and abroad [see 22 Sep]. It is based on an investigation by the General Accounting Office of the scientific and practical aspects of terrorists carrying out large-scale chemical or biological attacks on US soil, the report from which has already been released [see 7 Sep]. Assistant Comptroller General Henry Hinton presents its main findings. Also testifying, and offering comments on the GAO report, are Brian Jenkins of Rand Corporation, and Raymond Zilinskas and John Parachini, both of the Monterey Institute of International Studies. A common thread in the testimony is that the threat of chembio terrorism is real, but commonly overstated.

21 October In New York, one of the UN Disarmament Week panel discussions organised jointly by the NGO Committee on Disarmament and the UN Department for Disarmament Affairs is devoted to CBW issues. The panellists, chaired by Under Secretary-General Jayantha Dhanapala, are Tibor Tóth, chair of the BWC Ad Hoc Group, Huang Yu, Director of the External Relations Division of the OPCW Technical Secretariat, and Matthew Meselson of the Harvard Sussex Program.

22 October The US General Accounting Office submits to the Senate Committee on Veterans' Affairs its report on *Medical Readiness: DOD Faces Challenges in Implementing its Anthrax Vaccine Immunization Program* [AVIP] on which it commenced work in July 1998 [see also 12 Oct]. The report examines and presents much information on AVIP, its implementation and the situation at BioPort, which is the sole-source supplier of the vaccine. It makes recommendations of which the principal one is that the Secretary of Defense should: (a) develop plans against the contingency of further supplies of the vaccine not becoming available as anticipated; (b) issue guidance that will secure consistency in the reporting of adverse reactions to the vaccine; and (c) establish data-collection measures that allow AVIP to monitor performance and target training and research resources.

25 October In Iraq, the presence of two Russian civilian agricultural advisers at a pesticide factory is reported in *US News & World Report* with attribution to unidentified "intelligence sources", who have identified the Russians as "former subordinates of retired Gen Anatoly Kuntsevich [see 16 Jan 96 and 22 Apr], the former deputy commander of the Russian Army Chemical Corps". The magazine then quotes "a Mideast intelligence source" as saying that "the two former Army officers are experts in a relatively new class of Russian chemical weapons, known as the Novichok group [see 4 Feb 97 and 25 May]". It asks: "Could Iraq be seeking to produce Novichok agents?"

25 October–2 November In Romania, at the Snagov Complex 30 km from Bucharest, the OPCW Technical Secretariat in cooperation with the Romanian CWC National Authority, conducts two parallel courses, one basic, the other advanced, for personnel involved in implementation of the CWC.

26 October In Bucharest, during a symposium on the problems of pollution of the Danube, the head of the UNEP Balkans Taskforce [see 20 Jul], Pekka Haavisto, whose report on the environmental aftermath of the Kosovo war had been transmitted to the UN Secretary-General a few days previously, calls for a review of the rules of warfare. He questions, in particular, the propriety of the bombing of industrial plant close to big cities where the risk of pollution could become life-threatening. Participants in the symposium, which, on the proposal of the ecumenical patriarch of the Orthodox church, Bartholomew I, addresses scientific, religious and environmental aspects of its subject, have just travelled the length of the Danube, observing such especially polluted parts as those at Novi Sad and Pancevo.

26 October The UK Ministry of Defence is again postponing decision on its plans for the partial privatization of its Defence Research and Evaluation Agency [see 25 Jul]. It tells the House of Commons that it has decided to widen the scope of its consultations on the appropriate form of a Public Private Partnership for the Agency: "We continue to work positively for a PPP result which will strengthen DERA's ability to continue to provide world class scientific research and enable it to be a flexible and responsive organisation which can attract investment and develop new business, while at the same time preserving our essential defence interests and maintaining our valuable collaborative relationships."

27 October In the United Kingdom, 3,128 veterans of the Gulf War have now registered with the Gulf Veterans' Medical Assessment Programme [see 30 Jan], which the Ministry of Defence has been running as part of its response to the prevalence of unexplained illnesses among the veterans.

27 October The UK House of Commons is informed by the Defence Ministry that Operation Abbott, which is the clearance of buried wartime ordnance, including chemical weapons, from former firing ranges at Winterbourne Gunner [see 19 Oct 98], cost some £500,000 during the period November 1998 to July 1999. The disposal programme is scheduled to finish during financial year 2002–03.

27 October In the US Senate, the Armed Services Subcommittee on Emerging Threats and Capabilities conducts a hearing on *Agricultural Biological Weapons Threats to the United States* [see also 14 Sep]. Starting in closed session, the Subcommittee hears from a panel of intelligence-community

witnesses. There is then open testimony from a panel of administration witnesses beginning with Dr Floyd Horn [see 14 Sep] of the Department of Agriculture, Administrator of the Agricultural Research Service and, as he explains, chair of the Bio-Security Committee of the Department, through which is mediated its cooperation with other departments and agencies of government in implementation of PDD 62, the President's counter-terrorism directive. Also testifying are his counterparts from the Defense Department: the Deputy Assistant Secretaries for Threat Reduction and Counterterrorism policies, respectively Susan Koch and Robert Newberry, who likewise describe their organization and readiness for countering agricultural bioterrorism. The third and final panel comprises the President of Kansas State University, John Wefald, and the head of pathology at the university of Georgia College of Veterinary Medicine, Corey Brown.

27 October US Ambassador-at-Large for War Crimes David Scheffer, addressing the Carnegie Endowment for International Peace and, next day in New York, the National Assembly of the Iraqi National Congress, describes how the United States is aiming to secure the indictment and prosecution of the leadership of the Iraqi regime by an international criminal tribunal. Both presentations set out in detail the terrible depredations of that regime upon the people and environment of the Kurdish and Southern Marshland areas of Iraq. Ambassador Scheffer ascribes nine major international crimes to Saddam Hussein, two of them including large-scale use of poison gas. To both his audiences Ambassador Scheffer says: "Saddam Hussein and his henchmen are still viewed by some governments as legitimate tolerable leaders of a country somehow under siege by the international community. They are viewed as men with whom people want someday to do business, to open up channels of trade, and even to forget and forgive. In reality, these are thugs who terrorize what was once, and could again become, a great nation. The United States Government is determined to see this clique of Iraqi criminals stripped of their power and, if possible, brought to justice. They should benefit from no contracts, no trade, no initiatives that would bestow any legitimacy on their criminal enterprise in Baghdad. They should be isolated, cut off, and brought before the gates of justice. That would be far more generous and humane than what they have offered hundreds of thousands of their victims."

27–28 October In Munich, at the German Armed Forces Medical Academy, the Federal German Defence Ministry convenes its sixth international *Biological Medical Defence Conference*.

28 October In Moscow, the Russian Defence Ministry press service states that Chechen fighters in Grozny are preparing to use chemical weapons, in particular the mustard gas with which "they are armed", against federal forces [see also 5 Oct]. The press service also announces that gas masks are being urgently delivered to "bandit units".

Next day in Washington, upon the conclusion of a working visit, Russian Interior Minister Vladimir Rushaylo tells reporters: "Abstracts from instructions on the use of bacteriological weapons were found on killed Chechen bandits who took part in the attack on Dagestan last August and September. We have identified people who were behind this. They include not only members of illegal armed formations in Chechnya, but also international terrorists, well known to law-enforcement bodies of West European countries and the United States.

28 October In Turkey, Foreign Ministry spokesman Sermet Atacanli denies the allegation, repeated the day previously on ZDF television in Germany, that "Turkey uses chemical weapons against the terrorist organization", meaning the Kurdistan Workers Party (PKK) [see 17 May]. He states that Turkey has assumed the obligation not to develop, produce, store, or use chemical weapons, which it meticulously observes. He goes on: "It is logical to infer that Turkey cannot use such weapons if they do not exist in Turkey".

The Ministry spokesman was referring to a ZDF programme about aspects of German-Turkish military cooperation shown on *Kennzeichen D* which had referred to evidence that, on 11 May, the Turkish army had infringed the Chemical Weapons Convention by using CS gas against PKK fighters who had retreated into a cave near Balikaya, southeast of Sirnak, 20 of whom were killed. Munition fragments had been recovered from the site, and their examination at the Forensic Medical Institute in Munich had unequivocally shown traces of CS. The munitions were CS cartridges made in Germany and exported under licence to Turkey. [Note: As is well known, agent CS can be, and often is, used as a riot control agent. But it is still a toxic chemical within the meaning of the CWC and therefore subject to the general purpose criterion of Article II.1(a) that determines whether activities involving toxic chemicals or their precursors are or are not subject to prohibition under the treaty. Law enforcement is an activity for which the use of such chemicals is expressly not prohibited under the Convention. Use of riot control agents as a method of warfare is, however, expressly forbidden. When armed forces kill 20 combatants in an engagement, is that law-enforcement or warfare? The Turkish Foreign Ministry statement did not address such questions. A central provision of the Chemical Weapons Convention was thereby disregarded.]

The ZDF programme had also stated that the German Bundeswehr was assisting the Turkish army in establishing a chemical laboratory for test and training purposes. This is largely confirmed by the German Defence Ministry, which states that the laboratory "is a purely defensive measure ... that will put Turkey in a position where it can identify and analyse chemical weapons and then take countermeasures". The Turkish Foreign Ministry, in a letter to ZDF, states that the joint Turkish-German defence industry project "has nothing to do with the manufacture or usage of chemical weapons".

29 October In Pretoria High Court the Basson trial [see 12 Oct] continues. The following report on the week's proceedings has been provided from the University of Cape Town by its Centre for Conflict Resolution:

"The trial of Dr. Wouter Basson began in earnest on Monday 25 October with Basson pleading 'not guilty' to the 61 charges put to him. The prosecution announced that they would not be appealing the judge's decision to drop charges relating to activities in Namibia (for which Basson is said to have qualified for amnesty) and charges relating to activities outside the borders of South Africa. It is possible that the prosecution may appeal the Judgement at the end of the trial.

"In his opening address, senior prosecutor Anton Ackerman (SC) told the court that the crimes for which Basson is to be tried cannot be regarded as apartheid crimes since most of the charges relate to Basson's self-enrichment schemes. He conceded however that some of the charges contained in the second volume of the indictment and relating to human rights violations were politically motivated. Ackerman also pointed to Basson's luxury lifestyle implying that it would have been impossible for Basson to maintain such a lifestyle on his civil servant's salary.

"The prosecution said that evidence would show that Basson's 'cover' of a prosperous businessman, used to set up Project Coast, was not a cloak he donned when acting in the interests of the SADF, but in fact a true reflection of his activity while building up a vast empire of business interests and valuable assets both in SA and abroad.

"The first witnesses to appear in court were the South African Narcotics Bureau officers involved in the sting operation which resulted in Basson's arrest in January 1997. It is interesting to note that the police officers testified that before the deals involving Basson they had never encountered Ecstasy capsules in South Africa.

"It was widely reported in South Africa that one of the police officers involved in the sting operation, Jacobus Paulos Wiese, announced after reluctant testimony that he was sympathetic to the accused and that he had known Basson in Ondangwa in Namibia whilst doing his national military service. The state declined to pronounce him a hostile witness.

"Turncoat, Grant Wentzel also took the stand during this week. Wentzel had been a member of a commodities company established by Basson in the early '90s and had been the person to approach Basson about an Ecstasy deal. Through Wentzel's testimony details began to emerge of Basson as the central figure in an international sales and procurement network which included arms deals. Deals involving Libya and Pakistan were mentioned and it was alleged that Wentzel had negotiated a deal with the Pakistani government involving the sale of AK47s, grenade launchers and ammunition for navy launches. There was even talk of deals with Iraq.

"Basson's defence in response to allegations of dealing in Ecstasy has been that the deal involved arms rather than drugs and that he had not been aware that a packet he had passed to Wentzel, leading to his arrest had contained Ecstasy capsules.

"In a surprise move in Thursday the defence team put it to Wentzel that through his company, Global Management, Basson and one of the other directors, Solly Pienaar, had travelled to Libya to collect funds for Winnie Madikizela-Mandela's defence in the trial relating to the disappearance of Stompie Sepei in the 80s. It was alleged that in returning to South African Basson and his colleague had delivered the money to the Mandela's Houghton home. The allegation was not tested. [...]

"On Friday 29 October Dr Johan Koekemoer, chief researcher and later director of research at Delta G Scientific from April 1986 to 1997, gave testimony. He spoke of the manufacture of [912 kg] Ecstasy at the front company under the codename Operation Baxil from about June 1992 to January 4, 1994.

"Koekemoer told the court that security at Delta G was extremely tight, laboratory access was strictly controlled and limited to senior staff and security breaches were dealt with in serious vein. The need-to-know principle was so strictly enforced that all but a handful of those directly involved knew that Project Baxil was about Ecstasy production. The rest of the staff, including junior members of staff involved in the project, were told they were making rocket fuel for France.

"Koekemoer also spoke of smaller SADF projects, such as small-scale manufacture of Blue Nitrate and various toxic substances, including a heart poison similar to digitalis.

"The MDMA [Ecstasy] made on large scale by Delta G was produced by a unique method, developed by Hennie Jordaan, a researcher at the company. The start-up chemicals were provided by the procurement front, Organochem, under the guise of being chemicals needed for the production of an insecticide. Dr. Philip Mijburgh, MD of Delta G, had told Koekemoer that the Ecstasy project was to be handled with the utmost confidentiality, on orders of the Surgeon General,

General Knobel, the minimum number of staff were to be involved and the end product would be used as an incapacitant for riot control.

“Koekemoer never believed Ecstasy could be used as a crowd control agent and was deeply concerned about the possibility of abuse of the substance.

“Koekemoer testified that he personally delivered the final product to the basement of the offices of Medchem in Pretoria, Medchem’s Managing Director was Dr. Philip Mijburgh. On at least two occasions when deliveries were made, Basson was in Mijburgh’s office.

“A young pharmacist who was recruited to work at Delta G after completing his national military service, Steven Beukes, also testified saying he’d known Basson since volunteering for Special Forces as a national serviceman in June 1984. The Special Forces Medical Unit then included nine doctors and two pharmacists and operated from Special Forces Headquarters. Beukes told the court that the drugs Scoline and Ketelaar were routinely included in the medical supplies packed in the bags the doctors would take with them on Special Force operations — along with morphine, antibiotics and the saws they might need for behind-the-lines surgery. Scoline and Ketelaar have been named in the charge sheet as the drugs used by Special Forces in overdose to murder people who posed a security threat to the country.

“In 1985, Beukes was asked by Basson to set up a facility to make Mandrax, including a laboratory where the base compound could be granulated. He made 100 000 tablets, marked MX on one side and RL (for Roussel Laboratories, legal manufacturers of Mandrax) on the other. All active ingredients were supplied by Basson to Beukes. Basson’s defence team has argued that the mandrax tablets produced by Beukes were in fact placebos, used by Special Forces to

infiltrate drugs and arms routes used by the military wing of the ANC.”

29 October In the US House of Representatives, a draft bipartisan resolution is submitted that would urge the US government to release all records in its possession relating to BW experiments conducted on prisoners by Unit 731 of the Imperial Japanese Army during the second world war [see 22 Sep], and would call upon the Japanese government formally to issue “a clear and unambiguous apology” for its war crimes. Representatives Dana Rohrabacher (R-California) and William Lipinski (D-Illinois) introduce the draft.

29 October US Forces Korea officials announce that the Defense Department has approved the command’s request that gas masks be issued 14,000 US civilians in South Korea, including family members of its 37,000 soldiers and civilian employees of the US military and embassy staffs. Next month they are to receive M17A2 masks and hoods. This action will augment existing force protection plans, and both US and Korean officials say that it is unrelated to any increased threat of CBW in the region [see 1 Oct].

31 October The text of the Chemical Weapons Convention is changed for the first time. Entering into force today is a revised notification procedure for international transfers of saxitoxin, which is a Schedule 1 chemical. The change is in the form of a new paragraph in Part VI of the CWC Verification Annex. Canada, with a trade interest in saxitoxin, had formally proposed the change 11 months previously under the CWC’s rapid amendment procedure, having first raised the matter in September 1997, during the fourth session of the OPCW Executive Council.

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