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## THE FIRST YEAR OF THE OPCW SCIENTIFIC ADVISORY BOARD

*Will Carpenter*  
*HSP Advisory Board*

The genesis of the Scientific Advisory Board (SAB) of the Organization for the Prohibition of Chemical Weapons (OPCW) has been recounted in a thorough article by Kathleen Lawand in issue 40 (June 1998) of *The CBW Conventions Bulletin*. The present article describes the creation of the SAB and summarizes its activities during the first year of its existence.

The nomination and selection of the members of the SAB was completed in the first half of 1998. There were 108 nominees proposed by 44 states parties (Africa Group — 6; Asia Group — 8; Eastern European Group — 9; Latin America and Caribbean Group — 6; and Western European and Others Group — 15).

The Director-General of the OPCW used as criteria for selection: (1) scientists of international standing; (2) a broad range of scientific and technical backgrounds and skills; and (3) a wide and balanced representation from the state parties.

Twenty scientists were selected for a term of three years. Ralf Trapp was appointed as Secretary of the Board. Trapp heads the International Cooperation Branch of the OPCW and prior to the entry into force of the Convention was with its Preparatory Commission. He brings a wealth of experience and skills to the Board.

The members of the Board are Dr Will Carpenter (USA), Prof Claudio Costa Neto (Brazil), Dr Ashok Kumar Datta (India), Dr Claude Eon (France), Dr Alfred Frey (Switzerland), Prof Shintaro Furusaki (Japan), Dr Thomas Inch (UK), Weimin Li (China), Dr Maria Consuelo Lopez-Zumel (Spain), Prof Gerhard Matz (Germany), Prof Brahim Youcef Meklati (Algeria), Prof Giorgio Modena (Italy), Prof Victor Petrunin (Russia), Prof Erno Pungor (Hungary), Dr Marjatta Rautio (Finland), Prof Burkhard Seeger Stein (Chile), Dr Abbas Shafiee (Iran), Prof Theodoros Solomon (Ethiopia), Prof Branko Stanovnik (Slovenia) and Prof Stanislaw Witek (Poland).

The first meeting of the SAB was held during the week of 21 September 1998. The meeting dealt, of necessity, with organizational matters and with briefings by members of the OPCW. Dr Claude Eon was elected Chairman of the Board, and the author was elected Vice-Chairman.

It was decided that the SAB could most effectively deal with issues by the use of temporary working groups

(TWGs), each with a specific subject. Working groups on the reporting of ricin production, chemical weapons destruction technologies and analytical procedures prepared reports and presented them at the second session, held during 21–23 April 1999. Other issues, such as 'production by synthesis' and salts of chemicals listed in the Schedule of Chemicals, were considered by the Board itself. The SAB's role with regard to these issues is to provide information and recommendations for consideration by the Director-General and the OPCW. The following summaries are based on the report from the second session of the SAB.

**Reporting of Ricin Production** The Board considered the preliminary report of its temporary working group on ricin, chaired by Dr Thomas Inch. Dr Claude Eon introduced the report. Several adjustments were agreed to and the report was adopted with these amendments. The Board passed the following recommendations to the Director-General:

- ricin, given its properties and history, is correctly placed on Schedule 1. At present, it has no uses except in very small quantities for research. There may be future medical applications, but they have not come along as quickly as predicted, and may never do so;
- ricin 'enters' the arena of declarable activities when it is extracted from the plant material (crude extract). It remains accountable as long as the A–S–S–B bond is not broken, irrespective of the isoform(s) present. That also applies to toxic mutants of ricin;

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- castor oil production facilities should not be subject to the Convention's reporting procedures under Schedule 1 as ricin is destroyed, not isolated;
- it should be noted that hot pressing of castor beans constitutes the economically preferred technological choice, and it also destroys the ricin contained in the seeds. Cold pressing, which continues to be done at the level of individual farmers, usually involves pre-soaking and steaming of the seeds before pressing. Thus, the Board considered it neither worthwhile nor realistic to establish a system for monitoring each and every producer of castor oil. However, given that castor seeds are a potential source for ricin extraction, the Board recommended that the Director-General encourage National Authorities in castor oil producing countries to promote hot pressing and other techniques that destroy ricin so as to minimize the risk of illicit ricin production. The OPCW may wish to consider establishing contacts with the appropriate authorities of states parties that produce castor oil in order to be able to address any concerns that may arise; and
- were castor oil producing facilities to be integrated into larger chemical production complexes with additional capabilities that might give rise to concerns, normal chemical industry reporting procedures under Article VI are likely to apply to these sites, unrelated to the presence of a castor oil pressing plant. Such sites are likely to be DOC sites, which are subject to declaration and eventually inspection under the Convention.

#### **Chemical Weapons Destruction Technologies**

After a briefing by the chairman of its temporary working group on chemical weapons destruction technologies, Prof Giorgio Modena, the Board agreed that:

- the OPCW should become the main repository of information on chemical weapons destruction technologies. To this end, contacts had been established, *inter alia*, with the IUPAC Committee on CW Destruction Technologies. The Technical Secretariat should support the setting up of a database on destruction technologies, as required; and
- the next meeting of the temporary working group on chemical weapons destruction technologies is scheduled for 11–12 October, in combination with the TWG on equipment issues.

**Adamsite** Following a request by the Director-General, the Board conducted an initial discussion of technical criteria that should be taken into account when declaring holdings of adamsite. The issue was brought to the attention of the Board because of the divergence in the ways in which different states parties have declared such holdings. The Board recommended that this issue be discussed by a temporary working group, and that a technical seminar be convened to study the scientific aspects relevant to declarations of such holdings. The TWG is scheduled to meet during 7–8 October.

**Analytical Procedures** The Board was given comprehensive briefings on the analytical activities carried out by the OPCW. It recognized the professionalism and dedi-

cation of the staff involved. Still, for various reasons, analytical chemistry has not been used to the extent initially foreseen, and will probably not be used to that extent in the future. While the question of when and where analysis would be used needs further discussion, chemical analysis will still be needed to ensure confidence and to resolve possible doubts or misunderstandings. Thus, the Board feels that its temporary working group on analytical procedures, chaired by Dr Marjatta Rautio, should:

- review and suggest alternative inspection methods, with the aim of always using the simplest and least intrusive method possible that will meet the requirements; and
- address the use of analytical equipment belonging to the inspected state party (without prejudice to the OPCW's right to use its own equipment). The temporary working group on analytical issues should recommend key criteria that should be established in facility agreements to ensure that, when on-site analysis is carried out with equipment belonging to the inspected state party, the credibility of the results is ensured and protected.

#### **The Meaning of the Term "Production by Synthesis"**

The Board considered a report on this issue, which was prepared by some of its members during the intersessional period. The report was introduced by Dr Will Carpenter and was approved by the Board. The report concluded that from a scientific standpoint, it is no longer possible to make a clear distinction between 'chemical' and 'biological and biologically mediated' processes. The emphasis should be on the product rather than on the process. The impact of that approach on declarations would be negligible at this stage. Although no significant additional declarations would be required today, it would be prudent to keep the situation under review in the future, as advances in science and technology may lead to an increased number of chemical products being manufactured in sizable quantities using biological systems or principles.

**Salts of Scheduled Chemicals** The Board received a request from the Director-General to give its advice on whether the listing of certain scheduled chemicals containing amino groups implies that the provisions of the Convention also apply to the salts of these chemicals, such as hydrochlorides, even if the entry in the Schedules of Chemicals makes no mention of such salts.

In considering this issue with respect to the chemical listed in Schedules 1 and 2 (for which this question has particular bearing given the provisions relating to prohibitions on transfers of such chemicals to states not party to the Convention), the Board concluded as follows:

- the salts of these chemicals are chemically distinct from the parent compounds, and have different physical and chemical properties, as well as their own CAS registry numbers. However, the dynamic equilibrium between the base and the salt means that a certain amount of the free base is always present. The equilibrium is reversible, and the salt can easily be re-transformed into the base. In industry, a base is often converted to a salt if it is more convenient to handle a compound in that form. Normally, there is no essential difference between the

- free base and the corresponding salt from the standpoint of the end user; and
- the majority of board members concluded there should be no differentiation in relation to the treatment of a free base and the corresponding salts under the convention. There was a dissenting view that additional data may be needed to substantiate this conclusion; and
  - the same principle has long been accepted in relation to the control of narcotic drugs. For example, prohibitions in relation to morphine are of course also applied to morphine sulphate; in fact, the two names are used interchangeably.

**Equipment Issues** In relation to the tasks of this temporary working group, chaired by Prof Gerhard Matz, the Board agreed to recommend to the Director-General that the group address:

- recommendations in relation to equipment for continuous on-site monitoring at chemical weapons destruction facilities, with a view to optimizing the personnel resources required for permanent monitoring of destruction;
- improvements of the equipment used by the OPCW during inspections, mainly in respect to analytical equipment; and
- evaluations of simple analytical instrumentation or sensor technology that may be procured as approved equipment in the future.

A more detailed description of these tasks has been prepared by the chairman of the working group, and will be circulated at a later stage to all Board members and to other members of the group.

Following its second session, the Board's recommendations were considered by the Director-General. He accepted its conclusions on ricin and on salts of scheduled chemicals, recommending that they be endorsed by the Conference of the States Parties at its Fourth Session. With regard to 'production by synthesis', the Director-General reported the Board's conclusion to states parties and invited the Executive Council to consider it at its Sixteenth Session in September.

At its Fourth Session, the Conference of the States Parties decided that states parties and the Director-General should continue studying all three issues until the Fifth Session of the Conference of the States Parties during 15–19 May 2000.

The next meeting of the SAB is scheduled for 14–16 December 1999. The use of the temporary working groups will continue to be a significant method of providing input to the OPCW. It should be expected that the SAB contributions will continue to improve as the members become more knowledgeable about the issues and problems confronting the OPCW.

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*Dr Will Carpenter is Executive-in-Residence, Mississippi State University and Advisory Board Member of Chem First Company, Inc. He is a former Vice-President of Monsanto and was the Chemical Manufacturers Association representative to the US Government during the CWC negotiations.*

## Arie Jacobus Johannes Ooms

Jack Ooms, a founding member of the Advisory Board of the Harvard Sussex Program, died at his home in Spain on 6 September 1999. He was 74.

Both as a public servant and as a private citizen after 23 years at the head of Dutch chemical defence research, he worked for the eradication of chemical warfare, which he believed could best be achieved by a combination of good antichemical protection and international chemical arms control. The existence today of the Organization for the Prohibition of Chemical Weapons is testimony to his efforts, within the Netherlands, within NATO, in Geneva and finally in The Hague.

In 1942 Ooms entered the University of Utrecht to study chemistry. In 1943 he refused to sign the Nazi loyalty declaration and made his way to England by way of Spain and Portugal, much of it on foot. He joined the US Army and, in August 1944, returned to mainland Europe with the Allied landings in southern France. It was not until 1948 that he obtained his MSc degree at Utrecht, whereupon he was drafted into the Netherlands Army for his three years of national service. This took him to the newly created Chemical Laboratory of the National Defence Research Organization, where he finished his studies in 1952 and of which, in 1965, he was made director. The scientific research for which he became best known was done during those years, its first public manifestation being his doctoral dissertation for the University of Leiden in 1961, *The Reactivity of Organic Phosphorus Compounds towards Certain Esterases*. When the Chemical Laboratory was merged with the nearby Technological Laboratory RVO-TNO in 1978 to become the TNO Prins Maurits Laboratory, Ooms was made director of the new establishment and remained so until his retirement in 1988.

From 1969 onwards, Ooms served as technical adviser to the Netherlands delegation at the Geneva disarmament conference, a function which, uniquely among all the delegations, he continued until negotiation of the Chemical Weapons Convention was complete, more than 20 years later. He served a complementary function thereafter for his country's delegation to the OPCW Preparatory Commission.

In 1991 he was appointed to the UN Special Commission then being established to oversee Iraq's renunciation of weapons of mass destruction. Both in New York and in Iraq, he brought to this work too his customary wisdom, skills, energy and forthrightness. The work was continuing to engage him in the months immediately prior to his death.

Jack is greatly missed by his many friends and by those who knew and were inspired by his work against chemical weapons. He is survived by his beloved wife Marjan.

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## Developments in the Organization for the Prohibition of Chemical Weapons

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The main event during the period under review, from mid-June to early September, was the fourth session of the Conference of the States Parties which met during 28 June–2 July. During the Conference, the Director-General announced that the OPCW had designated an additional five laboratories for the analysis of authentic samples. Besides adopting the 2000 budget and agreeing on solutions to a number of unresolved issues, the Conference also decided to implement the verification regime for 'discrete organic chemicals' (DOCs) during 2000. Following discussion in the Security Council and between the UN and the OPCW, it was agreed that an OPCW team would travel to Baghdad in order to close down the UNSCOM chemical laboratory and destroy any samples it found there. The mission was completed successfully in late July.

One state, Micronesia, ratified the Convention during the period under review. At the time of writing, therefore, there are 126 ratifying and acceding states and 44 signatory states. When he visits the UN General Assembly in October, the Director-General will meet with representatives of many of the 44 signatory states, in addition to representatives of non-signatory states, in order to encourage them to ratify or accede to the Convention. In November, in cooperation with the government of Kenya, the Technical Secretariat will host a regional seminar in Nairobi in order to encourage the universality and implementation of the Convention in Africa. The Secretariat also continues its outreach activities to those delegations which are not based in The Hague.

As at previous sessions, the Conference spent a great deal of its time addressing organizational and administrative issues which could not be resolved at a lower level. This again impacted upon the time which could be spent on issues related to the implementation of the Convention. Still, the Conference did manage to take decisions on a number of organizational and administrative issues which had remained unresolved for many months, if not years. Examples include the staff regulations and the relationship agreement with the United Nations. However, the process for negotiating the 2000 budget proved almost as time-consuming as in previous years, although the number of contentious issues has decreased and the budget appears to have stabilised around the NLG 133,000,000 mark. Statements to the Conference included many useful suggestions for improving the working relationship between the organs of the OPCW.

### **Executive Council**

During the period under review there were no regular sessions of the Executive Council, but a further three specially scheduled meetings did take place. The sixth meeting, on 23 June, dealt mainly with preparations for the fourth session of the Conference. The meeting was therefore unable to

consider a number of implementation-related agreements and decided to schedule a meeting on 22 July, to address these. The eighth meeting, also held on 22 July, was requested by the US delegation. The Council will meet for its sixteenth regular session during 21–24 September.

**Status of implementation of the Convention** The Council returned to its consideration of the requirements for reporting information on verification activities, including inspection results. This issue has originally been referred to the Council by the third session of the Conference. The USA and Italy further advanced their joint initiative, which they launched at an informal Council meeting on 14 January, with the submission to the Council's sixth meeting of two joint papers. The first paper, in the form of a draft Council decision, included a proposed format for the *Status of Implementation Report (SIR)*. If adopted, the decision would require that the SIR be submitted on a quarterly basis to all states parties which are deemed by the Director-General to be in compliance with the provisions of the Convention relating to the protection of confidential information. In an attempt to allay the concerns of some states parties, the second paper demonstrated how sensitive information in the SIR could be protected. This would be done principally through the coding and masking of such information, allowing the inclusion of useful information without providing enough data to approve a challenge inspection or for political confrontation in the Council. States parties in need of further clarification would still therefore have to follow the graduated procedure spelt out in Articles VIII and IX of the Convention. The issue of agreeing upon a list of items which would fall under the purview of such a report, however, is still a major stumbling block. The Council decided to refer the issue to the fourth session of the Conference, with the recommendation that it be referred back to the Council for further urgent consideration.

**Roles and functions of the Council** The Council's eighth meeting was requested by the US delegation specifically to discuss the roles and functions of the Council. The US delegation stressed the need for the Council to provide executive oversight to the Secretariat without micro-managing its affairs and suggested that the organs of the OPCW review their roles, areas of authority, reporting responsibilities and consultative processes. The Council encouraged its chairman to take practical measures to improve the Council's functioning, taking into account recommendations of the Conference.

**Combined plans for destruction and verification of CWPFs** As reported in the previous quarterly review, the fifth Council meeting deferred consideration of the combined plans for destruction and verification for the HD distillation facility and the HD fill facility at Rocky Mountain

Arsenal, USA until after the fourth session of the Conference. These plans were accordingly considered and approved by the seventh meeting.

As of 1 September, all of the 60 Chemical Weapons Production Facilities (CWPFs) declared by nine states parties (China, France, India, Japan, Russia, UK, USA and two others) had been verified by the Secretariat as being fully inactivated. Of these 60 CWPFs, the Secretariat had issued destruction certificates for 14, conversion requests for five had been approved by the Conference, while the others were either subject to destruction or states parties would apply for conversion in the coming months.

*Requests for conversion of CWPFs* As reported in the previous quarterly review, consideration of a Russian request for the conversion of a former CWPF at Volgograd had been deferred until the Council's sixth meeting to allow time for more informal consultations. Following these consultations, the sixth meeting adopted the conversion request and forwarded it to the Conference for approval.

*Facility agreements* Consideration of five chemical weapons related facility agreements, deferred by the Council's fifth meeting, was taken up again by its seventh meeting. The agreements for two Schedule 1 facilities in the USA, the Single Small-Scale Facility (SSSF) at Edgewood Area, Aberdeen Proving Ground and the Protective Purposes Facility (PPF) at Fort Leonard Wood, were approved. The meeting also approved the three pending facility agreements for a Chemical Weapons Storage Facility (CWSF), a Schedule 1 facility and an unspecified facility in other states parties. The Council's fifth meeting had deferred consideration of the facility agreements for five Schedule 2 plant sites in Switzerland until the sixteenth regular session. This was mainly due to a lack of agreement before the Conference on the inspection frequency for Schedule 2 plant sites. The backlog of facility agreements can be broken down as follows: CWPFs — 46 facility agreements required (12 adopted by the Council); CWSFs — 32 (26); Chemical Weapons Destruction Facilities (CWDFs) — 33 (0); Old Chemical Weapons (OCW) — 3 (1); Schedule 1 — 23 (13); Schedule 2 — 85 (0); and Schedule 3 — 0 (0). Those agreements not yet adopted by the Council are either within the Secretariat, with states parties or have been submitted to the Council and are awaiting approval.

*Costs of inspections of old chemical weapons* The Council's fifteenth session had been unable to reach consensus on the unresolved issue of the attribution of costs of OCW inspections. Following further informal consultations by the friend of the chair, Mr Urs Schmid (Switzerland), the draft decision was considered again at the Council's sixth meeting. However, Council members once again failed to reach consensus and decided to refer the issue to the Conference.

*Implementation of DOC inspections* As reported in the previous quarterly review, the Council's fifteenth session reported that no proposals had been received from states parties with regard to the selection of DOC plant sites for inspection. At its fifth meeting, the Council therefore de-

cidated to inform the Conference that it would submit a substantive recommendation on this issue to its fifth session next year. The Council also requested the Secretariat to provide background information from the negotiation of the Convention in the Conference on Disarmament. The Secretariat duly provided a background note to the Council's sixth meeting, which contained six papers from the Ad Hoc Committee on Chemical Weapons. However, the meeting did not further consider the issue.

*Financial issues* The draft 2000 budget had been under consideration by the Council since February. Another draft, the fourth, was submitted to the Council's sixth meeting on 21 June, by the friend of the chair, Mr Hendrik Regeur (Netherlands). Two areas continued to cause disagreement amongst delegates; the detailed assumptions for verification, particularly relating to Schedule 2 inspections, and translations. Despite not having reached agreement on these two areas, the Council submitted the draft budget to the Conference and requested the friend of the chair to continue his efforts to achieve consensus. Along with the draft budget, the Council also submitted proposals by various states parties. Belgium, France, Germany, Italy, Japan and Spain submitted a proposal with the aim of limiting the number of Schedule 2 re-inspections until all newly declared Schedule 2 plant sites had received their initial inspections. They also proposed to delay the initiation of DOC inspections until initial inspections of all Schedule 2 plant sites had been carried out. However, other states parties, including Australia which submitted comments on the joint proposal, argued that the OPCW should avoid giving the impression that no Schedule 2 plant sites would be re-inspected and that the implementation of the DOC inspection regime should not be linked to progress with Schedule 2 inspections.

*Staffing issues* The Council continued to address the staff regulations with a view to finding an acceptable solution before the Conference. The friend of the chair, Ambassador L'ubomír Kopaj (Slovakia), reported to the Council's sixth meeting on the results of his informal consultations. However, he had to report that no final agreement had been reached. The Council therefore requested him to continue his consultations.

The Council also continued its consideration of the classification review of posts which had been undertaken in 1998. The implementation of the review's recommendations had been frozen by the third session of the Conference as states parties disagreed with its contents and methodology. The Council chairman reported on the results of consultations held since its fifth meeting. The Council recommended that the Conference should request the Director-General not to implement the original review, but to initiate a new study. The terms of reference and scope of such a study would be approved by the Council, while the Conference should decide when the new study should be initiated and how it should be funded.

*Other issues* The Council had been considering the list of new inspection equipment and revised specifications for approved inspection equipment since the third session of the Conference. However, despite intensive informal con-

sultations, the Council had been unable to reach consensus. The Council chairman reported to the sixth meeting on the results of the consultations, and the meeting renewed its consideration of the joint proposal submitted to the fifteenth session by China, Cuba, India, Iran and Pakistan on procedures for the procurement of inspection equipment. However, despite recognising the importance of the issue, the Council was again unable to reach consensus.

The friend of the chair on the fostering of international cooperation for peaceful purposes, Mr Armando Arriazola (Mexico), reported to the Council's sixth meeting on the results of informal consultations on the proposal made by Cuba, Iran and Pakistan to the third session of the Conference. The Council requested its chairman to inform the Conference of the results of these consultations.

#### ***Fourth Session of the Conference of the States Parties***

The fourth session of the Conference took place in The Hague during 28 June–2 July. It was attended by over 500 participants from 102 states parties, 14 signatory states, one non-signatory state, 4 international organizations and 8 non-governmental organizations.

***Opening of the session*** The session was opened by the outgoing chairman of the third session of the Conference, Ambassador Song Young-shik (South Korea).

In his opening statement, the Director-General highlighted the achievements of the OPCW since the last session of the Conference. The Director-General welcomed recent ratifications, but pointed out that areas of concern still existed, particularly in Africa and the Middle East. He stated his belief that the time had come for Arab countries to reconsider the value of linking their accession to the Convention with Israel's accession to the NPT. The Director-General expressed his concern that the lack of initial declarations from 29 states parties and the consequent limitations imposed on the OPCW in regard to the conduct of inspections in these states parties could call its credibility into question. The Director-General also addressed the issue of informal export control regimes, such as the Australia Group. He stated that "as the Convention contains its own in-house export control regime, it becomes increasingly difficult, after entry into force, to justify the continuing application of ad hoc export control regimes to States Parties to the Convention."

A major theme of the Director-General's statement concerned the level of international recognition and political standing which the OPCW had achieved since entry into force. The Director-General contrasted the professional manner in which the Secretariat had carried out its tasks with the unwillingness of some states parties to give the Secretariat the political support and recognition which it deserved. He also linked this to the way in which some states parties appear to have attempted to undermine the professional and morale status of Secretariat staff, through the long-running discussions on the staff regulations. According to the Director-General, the attitude of most states parties to the job classification exercise conducted in 1998 had also been extremely damaging to staff morale and had fur-

ther undermined the standing, credibility and effectiveness of the OPCW.

Similarly to the statement to the third session of the Conference, this statement also addressed the working relationship between the Council and the Secretariat. The Director-General pointed out that the Council's inability to make decisions had often meant that he had had to take decisions without the Council's political guidance. This in turn had led to accusations that he had exceeded his authority as Director-General. The Director-General stated that, for the sake of the credibility and international standing of the OPCW, he could not have acted otherwise: "The pioneering work of the OPCW cannot be allowed to be held ransom to short-sighted acts of micromanagement and, on occasion, to individual idiosyncrasies".

In a joint proposal, the chairmen of the Conference, the Committee of the Whole (CoW) and the Council and the Director-General announced their intention to establish an informal 'bureau'. The 'bureau' would meet on a regular basis and would review issues currently under consideration, progress made since the last meeting and the plan of work for the coming period. It is hoped that this innovation will enhance communication between the organs of the OPCW.

***General debate*** Forty states parties spoke during the general debate, with Germany and Algeria delivering statements on behalf of the members and associate members of the European Union and the countries of the African group respectively. In addition, a statement on behalf of the UN Secretary-General was read out by Ambassador Vladimir Petrovsky, the Director-General of the United Nations Office in Geneva and Secretary-General of the Conference on Disarmament.

***Appointment of officials*** Ambassador István Gyarmati (Hungary) was elected as chairman of the fourth session of the Conference. Representatives of the following states parties were elected as vice-chairmen: Kenya and Nigeria; Bangladesh and Pakistan; Bulgaria and Russia; Argentina and Brazil; and France and the USA. Ambassador Seyed Shamseddin Khareghani (Iran) was elected chairman of the CoW.

***Election of new Executive Council members*** The Conference elected 20 new members of the Executive Council. The new members are as follows:

- Africa — Algeria, Morocco, Namibia, South Africa;
- Asia — Indonesia, Iran, Pakistan, Sri Lanka;
- Eastern Europe — Poland, Russian Federation, Slovenia;
- Latin America and the Caribbean — Chile, Cuba, Peru, Panama; and
- Western Europe and Others — Austria, Canada, Netherlands, Spain, Sweden.

These appointments are for two years and will begin on 11 May 2000.

***Status of implementation of the Convention*** The Director-General submitted to the Conference a report on the status of submission of initial declarations and notifications by states parties. This report listed the following 29

states parties which, as of 15 June, had not submitted initial declarations as required by the Convention: Bahrain, Bolivia, Bosnia and Herzegovina, Botswana, Brunei Darussalam, Burkina Faso, Burundi, Costa Rica, Cyprus, Equatorial Guinea, Gambia, Guinea, Guyana, Kuwait, Lao People's Democratic Republic, Malawi, Mali, Mauritania, Namibia, Paraguay, Qatar, Moldova, Saint Lucia, Swaziland, Togo, Trinidad and Tobago, Turkmenistan, Tanzania and Viet Nam. The Conference expressed its concern at the continuing lack of initial declarations and the incompleteness of some of those submitted and requested the Council to monitor the fulfilment of this obligation by states parties. The Director-General also informed the Conference that only 43 states parties had submitted their national implementing legislation to the Secretariat. The Conference urged states parties to complete the legislative and administrative measures to implement the Convention as soon as possible. In addition, the Director-General reported that only 31 states parties had submitted information on their procedures for the handling of confidential information, as they are required to do by the Confidentiality Annex.

As reported earlier, the Council's sixth meeting referred the issue of the requirements for reporting information on verification activities, including inspection results to the Conference. The Conference received the two national papers produced by the USA and Italy for the Council. In accordance with the Council's recommendation, the Conference referred the issue back for urgent consideration.

*Status of contributions and reimbursements* The Director-General reported on the status of contributions by states parties to the 1999 budget. Of the total assessments of NLG 108,040,000 for 1999, the Secretariat had only received NLG 78,808,788 (72.8 per cent) as of 31 May. Of the then 121 member states, only 40 had paid in full, 25 had paid partially and 56 had not paid at all. The collection rates for the 1997 and 1998 budgets stood at 99.4 per cent and 95.4 per cent respectively. Members of the Council had set a particularly bad precedent in this regard. Of the Council's 41 members, only 18 had paid their contributions in full, 10 had paid partially and 13 had paid nothing at all. As in previous years, the Conference drew attention to Article VIII.8 which prohibits a member state from voting in the OPCW if its arrears equal or exceed the contribution due from it for the preceding two years, unless the Conference is satisfied that failure to pay is due to conditions beyond the control of the state party.

The Director-General also reported to the Conference on the reimbursement of verification costs by states parties which had made declarations under Articles IV and V. Of a total of NLG 12,402,769 invoiced to the eight relevant states parties (China, France, India, Japan, Russia, UK, USA and one other), as of 31 May the Secretariat had only received NLG 3,750,968, a shortfall of NLG 8,651,801. Only China and the UK had paid all of the amounts invoiced to them. The USA, Japan and one other had partially paid and France, India and Russia had paid nothing at all. Invoices for the first quarter of 1999 had not yet been sent out. The Conference requested the Council to monitor the fulfilment of this obligation by states parties.

*2000 programme and budget* As finally adopted, the budget for 2000 totalled NLG 132,748,000, which represents zero per cent growth on the 1999 budget. As required by the Convention, the budget is divided into two chapters, the first dealing with verification costs and the second dealing with administrative and other costs. For 2000, Chapter 1 costs amount to NLG 69,406,500 (a reduction on the 1999 figure of NLG 71,386,800), while Chapter 2 costs total NLG 63,341,500 (an increase on the 1999 figure of NLG 61,361,200). Excluding NLG 27,334,300 miscellaneous income, the total amount due from member states is NLG 105,413,700. Miscellaneous income includes items such as income from interest on bank accounts and reimbursements from some states parties under Articles IV and V of the Convention. It also includes the rent for the OPCW headquarters, its energy and maintenance costs and facilities for the annual Conference sessions. Currently, these costs are all met by the host country, but after 2001 they will be assessed to all member states. In the 2000 budget, these costs totalled NLG 7,774,600.

The OPCW expects to carry out 252 inspections in 2000: 120 chemical weapons inspections (including rotations to continuously-operating CWDFs) and 132 chemical industry inspections. It also expects to conduct six visits to CWDFs for initial and final engineering reviews. The fact that the OPCW has been unable to conduct inspections of the chemical industry in the USA proved problematic during the negotiation of the 1999 budget and continued to cause tension between states parties during the negotiation of the 2000 budget. The detailed assumptions finally adopted appeared to offer something to all sides of the debate. As with the 1999 budget, the 2000 budget assumes that the USA will declare 50 Schedule 2 plant sites. The planning for Schedule 2 inspections is based on two assumptions: that 14 of these 50 sites will be able to be inspected in 1999 and that priority will be given to initial Schedule 2 inspections in 2000. The remaining 36 inspections, along with 21 in states parties which submitted industry declarations during the first half of 1999, will take place in 2000, giving a total of 57 initial Schedule 2 inspections. The budget also provides for 10 Schedule 2 re-inspections, for a grand total of 67 Schedule 2 inspections in 2000. In addition, the Secretariat expects to conduct 34 Schedule 3 inspections and 6 DOC inspections. However, the budget also provides for alternative scenarios. One of these will almost certainly come to pass as the US statement in the general debate predicted that their industry declaration would be submitted "early next year at best". If the predicted 14 initial inspections cannot be conducted in the USA during 1999, the number of initial Schedule 2 inspections in 2000 will increase, the number of subsequent inspections will decrease and the number of Schedule 3 inspections will decrease. If the declaration is further delayed and less than 36 initial Schedule 2 inspections can be carried out in the USA in 2000, the resources will not be re-deployed to subsequent Schedule 2 inspections but will be re-deployed, according to the principle of equitable geographic distribution, to Schedule 3 and DOC inspections in states parties which did not receive any Schedule 2 inspections in 1998 and 1999.

The issue of fixed-term posts within the Secretariat proved to be much less contentious than in previous years.

The 1999 budget had authorised 496 fixed-term posts. The 2000 budget increased this by 11, to bring the total number of fixed-term posts up to 507. Of these new posts, five are in the professional category while the remaining six are in the general service category.

The Conference decided to establish two special accounts. According to the financial regulations, the funds in such accounts can be carried forward from one financial period to the next and can also be replenished by decision of the Conference. The two accounts created are for the equipment store and for activities related to designated laboratories. The first covers equipment acquisition and replacement and totals NLG 1,820,400, while the second deals with off-site sample analysis and totals NLG 1,392,000.

As recommended by the Council's fifth meeting, the Conference considered and noted the draft medium-term plan 2000-2003. The Conference encouraged the Secretariat to continue to refine the plan.

*Conference decisions* The Conference began its work by taking a number of procedural decisions on attendance by international organizations, non-governmental organizations and non-signatory states. The Conference also adopted a recommendation on ensuring the universality of the Convention which urged all states that had neither ratified nor acceded to the Convention to do so immediately. It recommended that states parties and the Director-General make efforts to encourage all non-states parties to join the Convention as soon as possible.

The Conference confirmed the conversion requests for two former CWPFs at Novocheboksarsk and Volgograd in Russia, which had been adopted by the fourth and sixth Council meetings respectively. It also confirmed the request submitted by a state party to the fifteenth session of the Council. The Conference has now approved the conversion of five former CWPFs since entry into force. In addition, the Conference confirmed the related Council decision on changes in chemical process equipment or plans for new types of chemical products at converted facilities. In his statement, the Director-General expressed his sincere hope that future conversion requests "will be judged solely on the basis of the risk which these converted facilities may pose to the object and purpose of the Convention". Conversion requests for former CWPFs must be submitted within four years of entry into force for a state party.

Despite intensive consultations during and between recent Council sessions and meetings, states parties had been unable to reach agreement on the staff regulations. By the time of the Conference, disagreement had been reduced to two issues: the length of tenure for Secretariat staff and issues related to the Secretariat's top structure. After much discussion, the Conference finally managed to adopt new staff regulations. The regulations specify that the OPCW is a non-career organization and that no permanent contracts will be granted. Contracts will initially cover three years, with extensions possible but becoming progressively more difficult. Most significantly, the regulations state that, except for general service staff and linguists, the total length of service with the Secretariat will be seven years. For the top structure posts, the initial contract period will be three years, with up to four one-year extensions. The Conference

noted a statement by its chairman which reminded states parties of the political understandings reached during the first session of the Conference on the Secretariat's top structure. The Conference tasked the Council's sixteenth session to decide on the effective starting date of the seven year period. It appears that some states parties wanted the new staff regulations to be implemented retroactively, so that the seven-year period would begin as of May 1997. However, the Director-General stated that, in the opinion of the OPCW legal adviser, the retroactive implementation of the new staff regulations would be illegal. The Director-General also pointed out that about half the current staff received their contracts at the same time, in May 1997. This means that, if the regulations were applied as of May 1997, in order to avoid the simultaneous departure of these staff members at the end of their seven-year tenure, he would need to conduct a forced phasing-out programme between May 2000 and May 2004. The forced turnover among professional staff would be about 20 per cent each year for the next four years, higher than the 10 per cent assumed in the 2000 budget. Summing up, the Director-General said that failure to consider corrective measures would "prevent Member States from having a strong independent multilateral organization, and, on top of that, would cost them much more".

The Conference also addressed the classification review of posts in the Secretariat. Because of the delay in the implementation of the review, around 70 Secretariat staff members initiated a group legal action to the International Labour Organization. As recommended by the Council's sixth meeting, the Conference requested the Director-General not to implement the original review, but to initiate a new study. The Conference decided that the terms of reference and scope of such a study should be approved by the Council and that the review would be funded by NLG 200,000 found within savings from the 1999 budget.

As reported in the previous quarterly review, the Council's fifteenth session adopted the draft relationship agreement with the UN and forwarded it to the Conference for approval. The draft was a revised version of the text upon which the third session of the Conference was unable to reach consensus in 1998. The Conference adopted the draft on the understanding that it did not want to reopen the draft text. The agreement will enter into force when the UN and OPCW exchange written notification that their internal requirements for entry into force have been met. It will be applied provisionally by the UN and the OPCW upon signature by the Secretary-General and the Director-General.

The Conference noted the report of the second session of the Scientific Advisory Board (SAB) and the Director-General's note on the report. As reported in the previous quarterly review, the Director-General had asked the Conference to endorse the SAB's recommendations with regard to the reporting of ricin production and salts of scheduled chemicals. Appropriate draft decisions addressing these issues were therefore prepared. However, believing that these issues required detailed consideration, the Conference decided that the Director-General and states parties should continue studying them until the fifth session of the Conference. The Conference endorsed the Director-General's rec-



ommendation that the Council's sixteenth session should consider the meaning of the term 'production by synthesis'.

As reported earlier, a draft decision on the attribution of costs of OCW inspections was referred to the Conference by the Council's sixth meeting. The facilitator, Mr Urs Schmid (Switzerland), had convened informal consultations immediately prior to the Conference, but was unable to reach consensus on the draft. The Conference considered the issue, but was also unable to reach consensus and requested the Council to urgently address it.

The Council's fifteenth session referred a privileges and immunities agreement with South Korea to the Conference for its approval. The Conference duly approved the agreement, bringing to three the total of agreements approved so far. The Conference also approved a decision delegating to the Council the authority to consider and approve a privileges and immunities agreement with Greece. The Director-General reported that a further 13 states parties were negotiating agreements with the Secretariat. He stressed the importance of the timely conclusion of agreements with those states parties in which the OPCW had designated laboratories.

As reported in the previous quarterly review, the fifteenth Council session considered the revised certification procedure for the central OPCW analytical database and on-site databases and recommended it for adoption by the Conference. The Conference duly adopted the revised procedure.

*Decisions on unresolved issues* The Conference considered a number of draft decisions dealing with unresolved issues. Some had already been submitted to, and approved by the Council, in accordance with the procedure for addressing unresolved issues and merely needed the Conference's final confirmation. This applied to the decisions on model facility agreements for CWSFs and CWPFs and also to decisions on the costs of inspections of Abandoned Chemical Weapons (ACW) and on the declaration requirements for chemical weapons. All four decisions were confirmed by the Conference and the issues were accordingly removed from the list of unresolved issues.

Consensus within the CoW on five other draft decisions had only been achieved immediately prior to, or even during, the Conference and there had therefore been no time for them to be submitted to the Council. These draft decisions covered a variety of issues. A draft decision on simulation equipment recommended that states parties should provide the Secretariat with a list of their simulation equipment holdings and that they consult with the Secretariat to establish the difference between the simulation equipment and the corresponding munition. The decision also outlined procedures for the handling of simulation equipment at CWDFs. A draft decision on the guidelines for scheduled chemicals in low concentrations was mainly procedural in nature, setting out a process by which a solution to the issue might be arrived at. It confirmed that declarations of plant sites are triggered by the amount of a Schedule 2 or 3 chemical contained in a mixture as well as its concentration. Declarations are required when the amount of the Schedule 2 or 3 chemical in a mixture exceeds the applicable declaration threshold and its concentration exceeds a yet to be determined concentration limit. The draft requested the Council

to prepare, for consideration and adoption during its seventeenth session, a recommendation on the applicable concentration limits for Schedule 2 and 3 chemicals, including a time frame for their implementation by states parties. The Council was also requested to prepare a recommendation on the application of the Convention's transfer regulations to Schedule 2 and 3 chemicals in mixtures. The CoW also submitted draft decisions on a model facility agreement for CWDFs, the timing of challenge inspection notifications and the meaning of the term "primarily for development of chemical weapons" in Article III.1(d). While the draft decisions on simulation equipment and low concentration guidelines were adopted by the Conference, consensus could not be found to adopt the other three and the issues therefore remain unresolved.

*Procedure for addressing unresolved issues* The procedure for addressing unresolved issues has remained largely unchanged since its inception at the first session of the Conference with issues being addressed by facilitators within the CoW. At the third session of the Conference there were suggestions that this procedure should not continue indefinitely, but there was also no consensus to change it. However, by the time of the fourth session, a number of contentious unresolved issues had been settled and others had been overtaken by events. It was also recognised that the continuation of the procedure could undermine the OPCW's credibility. The Conference therefore decided to end the intersessional role of the CoW and to establish instead a working group under the Council, open to all states parties, which would address the remaining unresolved issues. The group will meet on a regular, scheduled basis to allow the participation of national experts and can decide to organize its work into sub-groups. Once agreement on an issue has been reached, it will be introduced to the Council for consideration and approval and subsequent submission to the Conference for final adoption. The fifth session of the Conference will consider any issues which remain unresolved and adopt the group's recommendations or keep such issues on its agenda.

*Implementation of DOC inspections* According to Part IX.22 of the Verification Annex, the implementation of DOC inspections should begin in the fourth year after entry into force, unless the Conference in the previous year decides otherwise. As 2000 is the fourth year after entry into force, it was up to this session of the Conference to consider the implementation of the DOC verification regime. In accordance with Part IX.23 and 24 of the Verification Annex, the Director-General submitted two reports to facilitate the Conference's deliberations. The first report, a revised version of the report submitted to the Council's fifteenth session, detailed the Secretariat's experience in implementing the verification regime for Schedule 2 and 3 chemicals and in receiving declarations of DOC chemicals and related facilities. The second report presented the views of the Secretariat on the distribution of resources available for verification between plants producing DOCs containing the elements phosphorus, sulphur or fluorine (PSF) and other chemical production facilities. The report expressed the Director-General's belief that DOC plant sites with declared PSF plants pose a greater risk to the object and purpose of

the Convention and should therefore be subject to a higher inspection intensity. In the absence of a Conference decision on the distribution of resources, the report concluded that the Secretariat will use an inspection intensity which is seven times higher for DOC plants sites with PSF plants than for those without. The Conference did not take a decision not to implement the DOC verification regime, so inspections to DOC plant sites will begin in 2000. According to the 2000 budget, six such inspections will take place.

**Fostering of international cooperation** The Council's sixth meeting referred consideration of the proposal made by Cuba, Iran and Pakistan at the third session of the Conference back to the Conference. The Council chairman reported to the Conference that states parties had not agreed to adopt the proposal. The following states parties made statements on this agenda item: Iran, Cuba, Canada, Indonesia, Pakistan, Australia, Mexico, China, UK, Russia and Bangladesh. Many of the statements requested that the consultations on the joint proposal be intensified, with a view to it being adopted by the next session of the Conference. The Conference decided to refer the matter back to the Council.

Four states parties submitted national papers in fulfilment of their obligation under Article XI.2(e) to assess the consistency of their import-export controls with the object and purpose of the Convention. The paper by the USA addressed its export controls and their compatibility with the Convention. According to the paper:

national chemical nonproliferation export controls do not restrict legitimate trade and, ... they are integral to States Parties' Article I obligations. Nothing in the CWC obligates the United States or any other State Party to accept any modification, change in scope, or weakening of such national export controls.

Australia's paper informed states parties of some adjustments to its export and import licensing measures. It emphasised that Australia's export controls are non-discriminatory as licences for controlled chemicals are required for export to all destinations, including states party to the Convention. The paper by Canada reflected minor changes to its earlier paper due to the introduction of new permits. The paper also highlighted Canada's role in assisting other states parties, particularly developing ones, in implementing the Convention's import-export obligations. The Swedish paper noted that Sweden's import-export regulations meet the obligations of Article I of the Convention, while also constituting a base for unimpeded trade in chemicals for peaceful purposes in accordance with Article XI. The paper announced Sweden's willingness, under Article VII.2, to use its own experiences to support other states parties in implementing the Convention's import-export provisions.

**Reports** The Conference considered and approved the *Report of the Organisation on the Implementation of the Convention (1 January–31 December 1998)*. The chairman of the Council introduced the *Report of the Executive Council on the Performance of its Activities (5 September 1998–29 April 1999)* which was noted by the Conference. The Conference also noted the annual report by the Office of Internal Oversight, the report of the second session of the Sci-

entific Advisory Board, the report of the third session of the Confidentiality Commission and the Director-General's report on the implementation of the confidentiality regime within the Secretariat.

### **Action by Member States**

**Ratifications** During the period under review only one state deposited its instrument of ratification with the UN Secretary-General in New York. Micronesia ratified on 21 June (entry into force on 21 July) bringing the total number of states parties to 126 and the number of signatory states to 44.

### **Technical Secretariat**

**Mission to UNSCOM chemical laboratory** Following discussions in the UN Security Council, the Under Secretary-General for Disarmament Affairs wrote, on behalf of the UN Secretary-General, to the Director-General requesting the OPCW's assistance in closing down UNSCOM's chemical laboratory in the Baghdad Monitoring and Verification Centre (BMVC). The Director-General called an informal meeting of the Council on 25 June to inform members of the UN's request and of his intention to offer a team of four inspectors. In making this offer, the Director-General stressed the 'one-off' humanitarian nature of the mission, the fact that it was not an inspection and would not impact on future UN decisions with regard to Iraq. The team's mandate was as follows: to ascertain the existence or otherwise of chemical agents in the BMVC; to evaluate the status of the laboratory; to destroy the conventional laboratory chemicals and chemical standards; to remove the mustard samples; and to switch off the laboratory's equipment.

On 6 July the Secretary-General accepted the OPCW's offer and confirmed that the Iraqi authorities would cooperate fully. It was also confirmed that the OPCW team would follow OPCW methods and procedures and report back to the Director-General, who would submit the final report to the Secretary-General. The team was composed of Mr Dirk van Niekerk (South Africa), Mr Sergey Orlov (Russia), Dr Miroslav Miklasz (Poland) and Ms Li Hua (China).

Following briefings by UNSCOM staff in Bahrain, the OPCW team arrived in Baghdad on 14 July. Following more discussions in the Security Council, the team, accompanied by three observers from the Chinese, French and Russian embassies, eventually entered the chemical laboratory on 18 July. After compiling an inventory of the laboratory, the team set about destroying the mustard gas samples, reference standards and laboratory chemicals and overpacking samples taken from Iraqi sites. However, the lack of consensus in the Security Council over what to do with seven VX reference standards found in the laboratory delayed the completion of the team's mandate until this issue could be resolved. Upon being informed of the Security Council's decision, the team destroyed the VX standards and left Baghdad on 28 July, having fulfilled its mandate.

**Declaration processing** The security audit team met in The Hague during 31 May–10 June to conduct the operational audit of the Electronic Document Management System (EDMS). However, upon its arrival, the team was

informed that while much progress had been made, the internal preparations for the audit had shown that some procedures required further development and elaboration. For this reason a full operational audit was not carried out and is now expected to take place during the week of 24 October.

*Inspections* As of 1 September, the Secretariat had carried out 535 inspections at 291 sites in 30 states parties. The breakdown of these inspections was as follows: 124 to CWPFs; 76 to CWSFs; 123 to CWDFs; 51 to Schedule 1 facilities; 108 to Schedule 2 plant sites; 19 to Schedule 3 plant sites; 10 to abandoned chemical weapons (ACW) sites; and 24 to OCW sites. OPCW inspectors had spent a total of 34,394 person-days on mission.

*Implementation of Article X* The Director-General reported to the Council that, as of 1 August, only 12 states parties (Albania, Belarus, Canada, Czech Republic, Denmark, Finland, France, Lithuania, Romania, Sweden, Switzerland and UK) had submitted information on their national programmes related to protection against chemical weapons, as required by Article X.4. Of these 12 states parties, 5 (Belarus, Czech Republic, France, Sweden and UK) had reported twice. The Director-General strongly reiterated his request for states parties to meet their obligations under Article X.4.

The second part of Article X.5 requires the Secretariat to provide expert advice and assist states parties in identifying how their protective programmes could be implemented. As reported in previous quarterly reviews, the Secretariat has established a 'protection network' to which a number of states parties were invited to nominate experts. As of 1 August, ten states parties had nominated experts. The Secretariat has also initiated a series of protection courses in states parties which request expertise and advice. The first such course took place in Addis Ababa, Ethiopia during 23–28 May and the second course took place in Kuldana, Pakistan during 12–17 July. The courses covered all aspects of protection against chemical weapons, including detection, decontamination, personal protection and civilian protection.

Under Article X.7, states parties are obliged to select one or more of three options to provide assistance through the OPCW. As of 1 August, 21 states parties (Belgium, Canada, Chile, Denmark, Finland, Hungary, Ireland, Italy, Japan, Kuwait, Luxembourg, Netherlands, New Zealand, Norway, Oman, Peru, Slovenia, South Korea, Sweden, Switzerland and Turkey) had contributed NLG 1,253,642 to the voluntary fund for assistance under Article X.7(a). The first agreement under Article X.7(b) was concluded in the form of a memorandum of understanding between the Director-General and Iran. The MoU covers the provision of medical emergency assistance teams and treatment of chemical weapons casualties at Iranian hospitals. A total of 25 states parties (Australia, Austria, Bulgaria, Croatia, Cuba, Czech Republic, France, Germany, India, Iran, Latvia, Mongolia, Pakistan, Poland, Portugal, Romania, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, UK and USA) had made unilateral offers of assistance under Article X.7(c) and three had provided statements relating to Article X.7 which did not clearly indicate which of the three options had been chosen (Belarus, Monaco and Morocco). As part of its offer under Article

X.7, the Czech Republic hosted a civil defence training course at the Institute of Civil Protection in Lazne Bohdanec during 9–13 August which was attended by 40 participants from 29 states parties. The course covered civil chemical weapons protection, detection and decontamination.

The Secretariat is also developing its capacity to manage the international community's response to a call for assistance. In November 1998 a one-year training programme for investigations of alleged use (IAU) was initiated. The programme will culminate in an IAU exercise in the Czech Republic during 18–20 October. So far, the training programme has demonstrated that many of the experts nominated by states parties are from fields already well covered by Secretariat staff. However, it was also noted that there are a number of areas in which the Secretariat lacks in-house expertise, such as biomedicine, pathology, forensic medical science, biological sampling and toxicology. The Director-General therefore asked states parties to review their lists of experts.

*Implementation of Article XI* One of the Secretariat's programmes under Article XI provides assistance and support to national authorities. A national course was held in Ukraine during the period under review, and another is to be held in Viet Nam in the second half of November. During 26–27 June, the Secretariat hosted the first annual meeting of national authorities and the first meeting of chemical industry representatives. The meetings were designed to encourage cooperation and dialogue between national authorities and to allow the chemical industry a chance to express its views on the implementation of the Convention. The meetings were attended by 93 officials representing 78 national authorities and 27 representatives from chemical industry associations. These meetings are likely to become an annual event. The Secretariat has also prepared an information package to assist national authorities in familiarising themselves with OPCW approved inspection equipment. The package is contained on a CD-ROM and includes photographs and detailed information on inspection equipment.

Under its programme for national capacity-building relevant to the implementation of the Convention, the Secretariat is sponsoring visits by a scientist from the Centre of Excellence in Geochemistry in Petrobas, Brazil to OPCW-designated laboratories in Finland, the Netherlands and Switzerland. The Brazilian laboratory is preparing to participate in OPCW proficiency tests and the scientist is responsible for its accreditation project. During 22–25 June, UNITAR, the IOMC and the IFCS hosted, together with the OPCW, a thematic workshop on the strengthening of national legislation and policies for the sound management of chemicals. The workshop was intended to help developing states and those with economies in transition to overcome an overly sectoral approach in legislating chemicals and to facilitate the development of a national legislative framework. The Secretariat has published a summary of the workshop proceedings {S/127/99}. During 2000, the Secretariat plans to arrange an international symposium on enhancing legal assistance among states parties and a workshop on infrastructure building.

Article XI provides for the exchange of chemicals, equipment and scientific and technical information for purposes not prohibited under the Convention. During the period under review, the Secretariat supported a number of meetings and conferences and enabled scientists from developing states parties and those with economies in transition to attend. These events included the aforementioned workshop in Geneva in June, a preparatory meeting on natural products research in Amsterdam and EUROTOX '99 in Oslo, both in July. The Secretariat is also sponsoring an internship by a Moroccan scientist at the University of Rome. Although several requests for equipment have been received through the OPCW's technology and equipment transfer website, no transfers took place during the period under review.

**Designation of laboratories** The Director-General announced that five laboratories had been newly designated by the OPCW for the analysis of authentic samples and that all of the seven laboratories designated last year had retained their designations {S/125/99}. The newly accredited laboratories were:

- Research Institute of Organic Syntheses, Centre of Ecology, Toxicology and Analytics, CETA (Czech Republic)
- DGA, Centre d'Etudes du Bouchet (France)
- Chemisches Zentrallabor Wehrwissenschaftliches Institut für Schutztechnologien — ABC-Schutz (Germany)
- Analytical Laboratory for Chemical Weapons Convention Verification of Military Institute of Chemistry and Radiometry (Poland)
- CB Systems, CBD Porton Down, DERA (UK)

These laboratories have all performed successfully in their last three proficiency tests, including one in 1998. Any laboratory which performs equally in the future, will also be designated by the OPCW. Any designated laboratory which fails to maintain its ability to meet the criteria will be removed from the list.

**Fifth official proficiency test** The Secretariat announced the results of the fifth official proficiency test on 25 June {S/124/99}. The test had been conducted from 3-26 December 1998 with a total of 20 laboratories from 17 states parties participating. The Secretariat was assisted by two laboratories, GSRDC-4, CB Department, Agency for Defence Development of South Korea and the Laboratory of the Government Chemist of the UK, respectively. Of the 20 participating laboratories, 14 met the adopted criteria and could be scored. Of these, ten identified all the deliberately introduced chemicals from the test samples and reported them with the requested analytical data. Of the six laboratories which could not be scored, three reported false positives or irrelevant results, two did not provide supportive data and one did not submit a report.

The sixth official proficiency test began with the dispatch of test samples to 25 participating laboratories from 22 member states on 1 September. The Military Institute of Chemistry and Radiometry Laboratory of CWC Verification in Poland prepared the test samples, and the Edgewood Chemical and Biological Forensic Analytical Center in the USA will undertake the evaluation.

**Official visits** During the period under review, the Deputy Director-General travelled to Vienna during 7-9 June to address the international chemical demilitarisation conference, CWD '99, and to Moscow on 15 June to address the second conference on chemical weapons destruction in Russia. The Director for External Relations represented the Director-General at the seventieth ordinary session of the council of ministers of the Organization of African Unity in Algiers, during 8-10 July. He approached the representatives of a number of African states to impress upon them the need to adhere to the Convention at an early date and to inform them of ways in which they could be assisted in their ratification or accession procedures. The Minister of Foreign Relations of Mexico, Ms Rosario Greene, and the Minister of Economy of Slovakia, Mr L'udovit Cernák, visited the OPCW headquarters on 10 June and 8 September respectively. In October the Director-General will travel to New York to address the First Committee of the UN General Assembly and also to meet with representatives of signatory and non-signatory states.

**Outreach activities** During 3-5 November the Secretariat and the government of Kenya will host a regional seminar in Nairobi for countries of the African region. The Secretariat also hosted an induction course for new diplomats involved in the OPCW policy-making organs on 9-10 September in The Hague and a visit by the 1999 UN Disarmament Fellowship Programme on 20 September. The Special Adviser to the Director-General travelled to Geneva on 16 September at the invitation of the Ad Hoc Group of states parties to the Biological Weapons Convention in order to represent the Director-General and to address the group on the experiences and lessons learned in the establishment and operation of the OPCW.

**Staffing** As of 20 September, 479 of the allotted 496 fixed term posts within the Secretariat were occupied. Of these, 324 were in the professional and higher category and 155 were in the general service category. Including staff on short term and temporary assistance contracts the total number was around 530. With the transfer of six inspectors to the verification division there are now 203 inspectors and inspection assistants. Two P-5 staff members resigned during the period under review. They were Mr Pierre Cannone (France), head of the Training and Staff Development Branch and Mr Donato Kiniger-Passigli (Italy), head of the Media and Public Affairs Branch. They have been replaced, in an interim capacity, by Mr Carlos Dos Santos Soares (Brazil) and Mr Michael Carling (UK) respectively.

### **Subsidiary bodies**

**Scientific Advisory Board** The Board will meet for its third session during 14-16 December, in The Hague. As requested by the Director-General, the Board has begun to consider the technical criteria to be taken into account by states parties when declaring holdings of adamsite. It has established a temporary working group (TWG) on the issue, which will hold its first meeting during 7-8 October in The Hague. The existing TWGs on equipment and destruction technologies are to hold a combined meeting on 11-12 October.

**Confidentiality Commission** As reported in the previous quarterly review, the Commission will hold its fourth meeting at a reasonable time prior to the fifth session of the Conference.

**Future work** A number of important old unresolved issues were finally settled by the fourth session of the Conference, for example the staff regulations and the relationship agreement with the UN. However, there are still a number of other issues left over from the Preparatory Commission which need to be addressed and more issues which have arisen during the implementation of the Convention. Significant old unresolved issues which still require attention include the verification regime for OCW, particularly the question of “usability”, and guidelines for low concentrations, among others. The establishment of a working group should facilitate the resolution of many of these issues.

Following the fourth session of the Conference, there have been a number of changes in the management of the OPCW as a whole. The chairmen of the Conference, CoW and the Council and the Director-General all meet regularly as a bureau to plan and discuss the programme of work and to facilitate the information flow between the different organs. The Council has recognised the need to improve its working methods by focusing less on administrative matters and more on issues of policy, implementation and compliance. Within the Secretariat new management committees have been established, organized functionally rather than sectorally, which should allow for a more coordinated approach to issues.

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

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Progress in Geneva

Quarterly Review no 8

## Strengthening the Biological and Toxin Weapons Convention

A four week session — the fifteenth — of the Ad Hoc Group (AHG) to consider a legally binding instrument to strengthen the Biological and Toxin Weapons Convention (BWC) was held in Geneva from Monday 28 June to Friday 23 July 1999. As in the previous sessions, negotiations focussed on the rolling text of the Protocol.

Fifty-five states parties and four signatory states participated at the fifteenth session; a net total of two fewer state parties than in April as two states (Bangladesh and Kenya) participated in June/July whilst four states (Lebanon, Mongolia, Saudi Arabia and The Former Yugoslav Republic of Macedonia) which had participated in April did not in June/July. The same four signatory states participated in June/July as in April.

Thirty-one new Working Papers (WP.366 to WP.396) were presented in June/July. As usual these were presented both by States Parties (Germany/Sweden 3, Russian Federation 3, South Africa 3, Finland on behalf of the EU 2, Iran 2, Switzerland 2, Ukraine 2, UK 2 with single papers by 9 states and 1 by the NAM) and by Friends of the Chair (2). A new list of states parties was promulgated (BWC/AD HOC GROUP/INF.20) listing the 143 states parties and 18 signatory states as at July 1999: the two latest accessions were by Monaco and by Saint Vincent and the Grenadines.

A revised version of the Protocol was produced and attached to the procedural report of the July session (BWC/AD HOC GROUP/46 (Part I), 30 July). This was thus the ninth 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) and April 1999 (45). This was slightly shorter (310 pages) than the April version (with previous versions having totalled 113, 167, 241, 241, 251, 278, 312 and 315 pages respectively).

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). For the first time, the 177 page Part II to the June/July session is 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 thus text in Part II for all Articles other than the Preamble and Articles I, VI, VIII, X as well as for Annexes A, B and E and for Appendix C. 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.

Of the 40 meetings held, 14 1/3 were devoted to compliance measures, 9 2/3 to definitions, 7 to Article X measures, 4 to the investigations annex, 1 1/6 to confidentiality, 5/6 to organization/implementation, 2/3 to preamble, 2/3 to national implementation and assistance, 2/3 to legal issues, 2/3 to seat of the organization and the remaining 1/3 to an AHG meeting. 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. No new Friends of the Chair were appointed.

The AHG meeting as usual saw the presentation and distribution by the Department of Peace Studies at the University of Bradford of a further two Briefing Papers in its series: No 22 *Article VII Measures: Optimizing the Benefits* and No 23 *BTWC Security Implications of Human, Animal and Plant Epidemiology*. In addition, the first two in a new

series of Evaluation Papers No 1 *The BTWC Protocol: An Overall Evaluation* and No 2 *Article X: National Implementation Measures* were presented and distributed (Copies of all of these together with the Executive Summaries of the Briefing Papers are 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 on the subjects of the Briefing Papers. The Federation of American Scientists (FAS) distributed further papers entitled 'Views on Visits' and 'On the Question of Outbreak Declarations under a Biological Weapons Convention Compliance Regime' (Copies are available on the FAS website <http://www.fas.org/bwc/papers.htm>).

**Political Developments** On 29 June, during the first week of the session, a formal statement was made to the AHG by State Secretary Wolfgang Ischinger of Germany on behalf of the German Presidency of the European Union. This encouraged all Ad Hoc Group participants:

Let us therefore double our efforts to strengthen the BTWC by concluding the negotiations on the Protocol in order to give the Convention the necessary 'teeth'.

and went on to present the EU Common Position agreed on 17 May (see *Quarterly Review no 7*) which he said 'is intended to give this endeavour the EU's strongest support'. He noted that the policy statement had been officially endorsed by 28 European countries: the 15 EU member states and the associated and other states. His statement ended:

we firmly believe that unless we can achieve decisive progress now, we might risk stagnation or even retrogression. I believe that, all in all, the glass is more than half full and that we have grounds for optimism. By adopting this Common Position the EU has renewed its commitment to, and expresses its firm belief in, the success of these negotiations.

The second week saw on 8 July a formal statement by Jozias van Aartsen, the Minister of Foreign Affairs of the Netherlands, which emphasised the Netherlands government support for the AHG negotiations noting that:

Given the inherent difficulties of verifying the absence of biological weapons or biological weapons programmes, the compliance regime of the Convention should be at least as effective as that of the Chemical Weapons Convention.

He went on to outline the core elements of the regime observing that 'there has to be a small but adequately staffed organisation, with a professional inspectorate to implement the protocol'. He then expressed the sincere hope that the Ad Hoc Group will give favourable consideration to the candidature of The Hague for the seat. He said that:

We will put forward an offer that will ensure the efficient and cost-effective functioning of the future organisation. The international infrastructure and all necessary facilities are already in place in The Hague. ... One of the central elements in that bid will be the office building in which the future organization will be housed. At present we are aiming at a highly suitable building in the immediate neighbourhood of the Organization for the Prohibition of Chemical Weapons.

Co-location of the OPCW and the biological weapons organisation would bring many benefits to both organisations, such as economies of scale. The BW organisation could

draw on the extensive experience of the OPCW in setting up an international organization and implementing the verification regime. For member states it would entail a cost-effective representation to the two organizations.

The lessons learned by the OPCW during the past years are invaluable and should in our view be used in the related field of biological weapons. Of course, the OPCW model should not be copied indiscriminately. But it would be a waste of time and resources to reinvent the wheel on the many issues that are similar to both regimes.

He concluded by providing a 12 page illustrated booklet entitled *The Hague Strengthening the Biological Weapons Convention* to enable delegations to acquaint themselves with:

the city that one hundred years ago was chosen by Czar Nicholas II of Russia as venue for the first Peace Conference. The Hague seemed the logical choice for the czar, because of its political and economic stability, easy access from all parts of the world, ... The Hague seemed a logical choice then. I hope you share my conviction that it is the logical choice again today, or maybe I should say, **the bio-logical choice** for the headquarters of the BW organization.

### **The Emerging Regime**

The distribution of the meetings in the June/July session shows that most attention was paid to compliance measures, definitions, Article X measures and to the investigations Annex with about one meeting apiece to the other subjects.

**Compliance Measures** The June/July session saw a complete reading of Article III *Compliance Measures* with the text being developed in a number of areas. A particular development, which clearly reflected the experience of the OPCW in respect of CWC declarations, was the addition of a new section in Article III *D. Declarations* entitled *III. Measures to ensure submission of declarations*. The provisions in this section require the Director-General as soon as possible after the deadline for the submission of initial or annual declarations has passed to issue a written request to states parties which have not submitted all their declarations and that the Director-General shall report to each session of the Conference of States Parties on the implementation of the declaration obligations. In addition, currently within square brackets, should a state party not submit its initial or annual declarations within the [6] month period following the relevant deadline, then one or more of the following measures may be applied:

- (a) The State Party shall have no vote in the Conference of States Parties;
- (b) The State Party shall not be eligible for election as a member of the Executive Council or, if already a member of the Executive Council, shall be suspended from membership of the Executive Council;
- (c) The State Party may not invoke the declaration clarification procedure ... or a facility investigation;
- (d) The State Party may not request the Technical [Secretariat][Body] for technical assistance under Article VII other than assistance in the preparation of declarations;
- (e) The State Party may not have access to the declarations of other States Parties;

(f) The State Party may not invoke those provisions on consultation, clarification and cooperation ...;

In respect of *III. D. Declarations I. Submission of Declarations*, the requirements for declarations were developed with some streamlining and with some language from the Republic of Korea and Finland (on behalf of the EU) being incorporated in square brackets without discussion. *II. Follow-up after submission of declarations* was also developed with the alternative title of transparency entering the heading (A) [*Randomly-Selected*][*Transparency*] Visits with the text being clarified with headings such as *Benefits* being incorporated. Likewise in (B) [*Declaration Clarification Procedures*][*And Voluntary Visit*] the language was clarified with useful new sub-headings such as *Consultations* and *Visit* appearing in the text. Section (C) *Voluntary Visits* saw the heading emerge from square brackets with text for different procedures depending on whether the voluntary visits are on the one hand to obtain technical advice on the implementation of declarations obligations or to obtain technical assistance under Article VII or, on the other hand, to resolve an ambiguity etc concerning a declaration or to resolve a specific concern as provided for under the consultations, clarification and cooperation procedures. As might be expected the principal difference is in the mandate for the voluntary visit.

Section F [*Measures to strengthen the implementation of Article III*] also was revised with some development of language. Section G *Investigations* made further progress with the language for the types of investigations beginning to emerge from square brackets:

[(a) Investigations to be carried out in geographic areas where the [release of, or] exposure of humans, animals or plants to microbial or other agents and/or toxins has given rise to a concern about a possible [non-compliance under Article I of the Convention][use of biological weapons], hereinafter referred to as ‘field investigations’.]

(b) Investigations of alleged breaches of obligations under Article I of the Convention, to be conducted inside the perimeter of a particular facility(ies) at which there is a substantiated concern that it is involved in activities prohibited by Article I of the Convention, hereinafter referred to as ‘facility investigations’.

As will be seen below, in Annex D on Investigations the terms ‘Field Investigation’ and ‘Facility Investigations’ are both clear of square brackets. In Section G *Investigations*, a new part [(B) *Outbreaks of Disease*] has been introduced. A NAM paper led to new text in this part which states:

If a State has a concern that an outbreak of disease is directly related to activities prohibited by the Convention, it shall provide in its request for an investigation, detailed information, reasons and evidence to demonstrate why, in its view, it considers the disease not to be naturally occurring.

Another development came in the contentious area of the Executive Council consideration of whether an investigation should proceed with language, heavily square bracketed, that has a different provisions for facility and field investigations:

22. The investigation shall proceed [in the case of a request for a facility investigation][if formally approved by at least a [two-thirds][three-quarters] majority [present and voting]

of the Executive Council][unless the Executive Council decides by a three-quarters majority of [all] its members [present and voting] against carrying out the investigation][and, in the case of a request for a field investigation, if formally approved by a simple majority of the Executive Council members present and voting].

The final section of G. *Investigations* which addresses (I) [*Adoption of a decision on the basis*][*Consideration*] of the findings of the investigation saw development of the text with clarification of actions that the Executive Council might take if it decides that there has been abuse which now includes not only that ‘the requesting State Party should bear some or all of the final implications of the investigation’ but also ‘[as well as indemnities to the receiving State Party]’.

*Annex D on Investigations* Further progress was made on the Investigations Annex with the simple terms *Field Investigations* and *Facility Investigations* emerging from square brackets and replacing the previous terms [*Field*] *Investigations [of alleged use of BW]* and [*Facility*] *Investigations [of any other alleged breach of obligations under the provisions of the Convention]*. Particular attention was paid to *III Facility Investigations* with good progress being made in removing square brackets and streamlining the text. Timelines for carrying out the investigation were discussed and alternatives introduced into the text. Language for (D) *Conduct of Investigation* was developed with new provisions, heavily bracketed, for the investigation team to determine the quantity of biological agents and toxins located at the facility. The term *Auditing* has now been replaced by *Examination of documentation and records*.

*Definitions* The title of Article II which continued to be the only Article with its title still in square brackets was modified to become [*Definitions [And Criteria]*]. The language in Article II was reworked although many of the terms continue to be in square brackets reflecting the divergent views on whether or not such terms **need** to be defined for the Protocol. In Annex A *Declarations I Lists and Criteria (Agents and Toxins)* alternative language is provided for some new introductory paragraphs which address the review of the lists of agents and toxins by the Executive Council. The lists of agents are now preceded by a new paragraph which usefully states that *pathogens causing zoonotic diseases appearing in one section of the list shall also apply to other sections*. The human pathogens list has been modified with *Burkholderia (Pseudomonas) pseudomallei* and *Rickettsia rickettsii* emerging from square brackets, four toxins being dropped from the list and the trichothecene mycotoxins being put into square brackets. In the animal pathogens list, African swine fever virus has emerged from square brackets whilst a new pathogen, Nipah virus, has been added in square brackets. The plant pathogens list has seen two pathogens, *Tilletia indica* and *Xanthomonas albilineans*, emerge from square brackets with two animal pathogens being dropped from the list. Annex A *Declarations II List of Equipment* has seen some removal of square brackets and tidying up and streamlining of the text. Additional tighter criteria have been added in square brackets in a number of cases.

**BWC Article X Measures** Particular progress was made on Article VII of the Protocol at the June/July session. There was a streamlining and development of the text together with the removal of square brackets throughout much of the Article. (A) *General Provisions* and (B) *Measures to Promote Scientific and Technological Exchange* saw useful progress. Following an Italian WP.383 advocating the potential role of the International Centre for Genetic Engineering and Biotechnology (ICGEB), there has been the insertion, in square brackets, in virtually every clause of a reference to ICGEB. In (D) *Institutional Mechanisms for International Cooperation and Protocol Implementation Assistance [and its Review]*, additional language from a Swiss WP.388 addressing the establishment by the Executive Council and the functions of what is called a *Scientific and Technical Cooperation Committee*, which is clearly an alternative name for the earlier 'Cooperation Committee', has been incorporated. In Section (E) *Cooperative Relationships with other International Organizations and among States Parties* the title has emerged from square brackets and progress has been made in the language with the removal of square brackets and the streamlining of the text. Section [(F) *Safeguards and Limitations*] was reduced from six to two paragraphs. It is clear that the negotiators

are engaged on Article VII and progress is indeed being made.

**Organization/Implementational Aspects** There was streamlining of the text in Article IX. Progress was made on the composition of the Executive Council with the options reduced to three relating to Asia — whether the area is to be called 'Asia', 'East Asia and the Pacific' or 'West and South Asia'. The final section on (E) *Privileges and Immunities* was reordered and streamlined.

**National Implementation and Assistance** There was streamlining and removal of square brackets in Article VI on Assistance and Protection. In Article X on National Implementation Measures the start of the second sentence which had been [*In particular, it shall:* became much more complex [*In particular, [it][shall][may][where appropriate and necessary]*]: indicating a surprising, given the OPCW experience, lack of agreement on the status of the obligations to implement the Protocol nationally.

**Confidentiality** Article IV saw removal of further square brackets and streamlining. Likewise Annex E also saw the removal of square brackets from a number of paragraphs.

## The developing BWC protocol



**Legal Issues** There was again some progress with the removal of square brackets from some of the text. In Article XX *Entry into Force* a second option was added to the previously bracketed option for a simple numerical formula for entry into force which was elaborated in July to language for entry into force 180 days after the deposit of the 50th instrument of ratification. The second option is for entry into force 180 days after the deposit of instruments of ratification by [45][75] states, including the governments of the depositaries of the Convention.

**Seat of Organization** The Friend of the Chair produced a revised draft questionnaire which is included as the final section of Part II of the procedural report.

**Preamble** Progress was made with consideration of the first 16 paragraphs which emerged from an overall square bracket so that some are now within individual square brackets whilst the first and sixteenth paragraphs emerged from square brackets.

### Prospects

The June/July session also saw the agreement of the programme of work for the four-week sixteenth session to be held from 13 September to 8 October 1999. The 40 meetings were allocated as follows:

Compliance measures	13
Investigations annex	6
Article X	8
Definitions	9
Confidentiality	0.67
Preamble	1
Legal issues	0.67
National Implementation	0.67
Organization	0.33
General Provisions	0.67
Total	40

Overall, the June/July session saw further progress in the areas of the draft Protocol addressed with particular progress being made in Article VII. In most areas of the Proto-

col, the FOCs have had three or four complete readings of the part of the rolling text for which they have responsibility. The last six months has seen the engagement of all delegations in serious negotiation. It is evident that the language for 18 of the 23 Articles is now very well developed. The other five are Articles I General Provisions, II Definitions, III Compliance Measures, VII Scientific and Technical Cooperation, and VIII Confidence-Building Measures. Article VII is making excellent progress as is Article III Compliance Measures which comprises with its Annexes well over 100 pages and therefore presents the major task facing the AHG. Nevertheless, all the essential elements for an effective regime are there. Article II on [Definitions] is the only Article with its title in square brackets and much time and energy is devoted to arguments about the potential implications of definitions on the Convention. The AHG need to focus their attention on the definitions **needed** to ensure that the measures such as declarations in the Protocol are unambiguous and hence that the information provided to the future BWC Organization is comparable.

The development of the Protocol can be shown graphically by first considering the phases through which the text for the individual Articles and the Annexes proceed as they mature. The actual development of the various elements of the Protocol can then be shown against this illustration. See *The developing BWC protocol*, opposite.

This shows that a great deal has already been achieved especially in respect of Article VI Assistance, Article X National Implementation and the various legal issues Articles V and XI through XXIII. The Articles on Confidentiality (IV), Organization (IX) and the Annex D on Investigations are also well advanced. Good progress is being made on Article III Compliance Measures and, in the last three sessions, on Article VII Technical Cooperation. Overall, an effective Protocol can be achieved within the next 12 months.

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

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## News Chronology

## May through July 1999

*What follows is taken from issue 44 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 these are held in hard copy in the Sussex Harvard Information Bank. 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.*

**3 May** The US government does not contest a civil suit filed by Saudi businessman Saleh Idris seeking release of US bank-account deposits frozen because of the suspicions of his involvement in terrorism that had also precipitated the US missile attack on a pharmaceutical factory he owned in Sudan, the Al-Shifa plant near Khartoum [see 1 Feb Washington]. A response to the suit had fallen due today. The Justice and Treasury Departments decide to unfreeze his assets. This is

widely seen as an admission that the missile attack had been a mistake, but a Justice official says it was because the government does not want to reveal sources of information in open court. Mr Idris' attorney, George Salem, says: "Fortunately we live in a country where we have a system of justice that requires that people produce evidence when someone is accused of being a terrorist". In Khartoum next day, a Sudanese minister of state for foreign affairs, Ali Namir,

is quoted by the official Sudan News Agency as saying that the decision to unfreeze the bank-accounts was "proof against the allegations" that chemical weapons had been made in the Al-Shifa plant and "showed the mistake of the aggression". US White House staffers are nevertheless said to be telling reporters that Idris, who is now planning to sue the US government for compensatory damages, is in fact a terrorist who maintains reprehensible associations. In a long interview for the London *Al-Sharq al-Awsat*, he describes in detail the circumstances of his ownership of the Al-Shifa factory, including his past association with the Bin Laden family.

Reviewing the whole affair, the *Boston Globe* writes: "And so it was that on the night of [21 August 1998], Saleh Idris went from being a well-respected businessman to an international terrorist. The campaign to defame his good name continues to this day, orchestrated from the offices of President Clinton's National Security Council. It is a despicable campaign, made more so by the fact that everyone involved in it knows that the charges against Idris are false." A similar but less explicit conclusion emerges from a later *Washington Post* review.

**4 May** In Utah, at the Tooele Chemical Disposal Facility, safety engineer Steve Jones returns to work after his dismissal near five years previously [see 1 Dec 94]. Having sued in federal and state courts, he has been reinstated by court order with back pay and damages.

**5 May** In Israel, the Ministry of Defence has agreed an out-of-court settlement with a former soldier claiming to have been partly disabled by a nerve-gas antidote. He had been used in human trials of the drug 25 years previously.

**5 May** The UK Defence Ministry launches what it calls "a wide-ranging consultation exercise" on the next step in the partial privatization of its Defence Evaluation and Research Agency, including DERA/CBD Porton Down. A range of "Public Private Partnership" options has been under study, and the one that is now favoured envisages a "special purpose corporate vehicle containing most of DERA's existing staff and facilities" but with some capability retained in the Ministry for operational and national security reasons.

**5 May** In Delaware, at Dover Air Force Base, base-commander Colonel Felix Grieder suspends anthrax-immunization vaccination because briefings given by the Defense Department had been "inadequate to dispel rumors and misinformation" about the vaccine [see also 29 Mar GAO]; the vaccinations would not be resumed until airmen's questions had been adequately answered. Later, USAF Surgeon-General Lt-Gen Charles Roadman accompanied by ten medical experts briefs personnel at the base, and the suspension is lifted.

**6 May** USSR biological weapons programmes are described in a book, *Biohazard*, published today by Random House and written by US journalist Stephen Handelman on the basis of hours of interviews with Ken Alibek [see 3 Mar], formerly a senior figure in some of the programmes. The book has been well publicized, and receives much notice. "Nowhere else, outside the combination-locked safes of the secret bureaucracies in London, Washington and Moscow, will you find such a detailed picture of the bioweapons programme of the former Soviet Union", writes Surgeon Commander Christopher Davis, recently retired from the UK intelligence community where for 20 years he had been studying USSR BW-related work [see 13-14 Jul 98]. Dr Alibek has just been appointed to the newly created position of Chief Scientist at

Hadron Inc, which is a Virginia-based information, management and technical services corporation specializing in the areas of trusted/secure computer systems, weapons-systems analysis and support, and computer-systems support. He continues to give interviews. Some of these add substantially to what is said in *Biohazard*.

For example, when asked by the Emergency Response & Research Institute in Chicago whether the Soviet Union had done "work on genetic engineering or altering of the properties of standard biological agents used for weapons", he had responded: "The Soviet Union has [*sic*] developed genetically altered antibiotic resistant strains of anthrax, plague, tularemia and glanders. New biological weapons (lab prototypes and pilot-plant techniques) have been developed on a basis of genetically altered plague, anthrax and tularemia. This country was intensively researching ways to genetically alter some viruses. For example, for years it was researching the ways to genetically alter variola major (smallpox virus) by inserting some new genes in this virus genome." Dr Alibek had also said to his ERRI interviewer: "In the late 80s, this country started to develop a new type of application [for non-explosive dispersal of biological agents] based on use of 'a low flying, high speed object' for BW application. Clearly, it was a research work to use cruise missiles for BW application."

**7 May** In Tokyo, official sources say that the governments of China and Japan have now completed their 6-year negotiation on the clean-up of the chemical weapons abandoned in China by the Imperial Japanese Army [see 1 Apr and 21 Apr] and have agreed the text of an 8-point memorandum of understanding that will shortly be signed in Beijing. Japan is to provide the necessary facilities, experts, expertise and funds (now estimated at 200 billion yen, about US\$1.67 billion); China, the appropriate cooperation. The clean-up is to commence at the beginning of April 2000, no deadline for completion yet being specified (but probably, according to "sources close to Prime Minister Keizo Obuchi", requiring an extension beyond the 10-year deadline of the CWC). A joint working group of experts is to decide on the disposal technology that is to be used, foreign know-how for which will reportedly need to be imported.

**7 May** Israeli CBW weapons are purportedly described in a long article datelined Jerusalem in the Arabic-language London weekly *Al-Hawadith*. Aspects of the 1992 El Al cargo-aircraft crash at Bijlmer near Amsterdam [see 22 Apr] are the article's point of departure. Describing the Israel Institute for Biological Research at Ness Ziona, the article states: "There are ten facilities equal to 40,000 square meters that are distributed underground. They produce various types of nerve gases and deadly viruses. Israel is prepared to use them in bombs, missile warheads, or in hand devices used by elements of the Mosad's assassination unit, known under the name of Kidun." Later the article states: "Limited distribution reports reveal that the burning and deadly nerve gases are available in large quantities within combat units of the Israeli army. The most lethal of these might be the bomb known under the name of the 'Big A'. It is considered to be the backbone of the long-range chemical deterrent and entered service in 1989. The first practical tests of this weapon were conducted inside special blocks in the Negev desert on April 23, 1990."

**7 May** UK Defence Secretary George Robertson, asked in Parliament about the Yugoslav CW capability [see 23 Apr], responds: "The former Yugoslavia did have an offensive chemical warfare programme, which included small stocks of chemical weapons. Serbia inherited some elements of this in

1992, but the exact status of the programme is unknown. It is assessed that the current threat to our forces from chemical warfare is low.”

**7 May** In District of Columbia Superior Court, suit is filed against CNN by April Oliver, the producer whom the television company had fired over the story alleging US employment of nerve gas during Operation Tailwind in the Vietnam War [see 17 Sep 98]. Although Ms Oliver is seeking damages for wrongful dismissal, claiming that CNN had based its decision to fire her “primarily on business and public relations concerns”, she says in interview that money is not her motive, rather that: “This is a useful opportunity for me to put facts on the table that have been buried — which CNN intentionally tried to bury. ... There are issues of honor at play here, and there are issues of fact-seeking and truth-finding. I want the public record restored on this so I’m not buried under a sea of character assassination and a sea of disinformation.”

**7 May** In the United States, technology demonstrations for non-incinerative chemdemil in the Army’s Assembled Chemical Weapons Assessment (ACWA) programme [see 2 Feb] are concluded. Final analysis of the results is not expected until June or July. Reporting to Congress is due by the end of September, whereupon Congress will have until April 2000 to decide on whether to support use of an alternative ACWA technology in place of incineration. Three technologies have been demonstrated: hydrolysis, by Parsons/AlliedSignal; hydrolysis and supercritical water oxidation, by General Atomics; and the Plasma Waste Converter technology of Startech/Burns & Roe. Other alternative chemdemil technologies — such as those of Teledyne Commodore, of Lockheed Martin, and of AEA Technology — had been excluded from the demonstration because of inadequate funding [see 29 Jul 98], this being taken (by the GAO) to mean that only the three cheapest could be invited to participate.

**10 May** The US Army announces that, in the chemdemil programme, 20 percent of the nerve-gas stockpile at Tooele has now been destroyed with the incineration there of the 5,446,400th pound of sarin. Also, with the completion of the 4.2-in and 105-mm projectile campaigns at the Johnston Atoll incinerator, more than 81 percent of the original mustard and nerve-gas stockpile there has now gone [see also 17 Mar].

**11–15 May** In The Hague, several thousand people from around the world take part in *The Hague Appeal for Peace: Civil Society Conference* to celebrate the centenary of the 1899 Hague Peace Conference [see 18–20 Feb] and to finalize and launch a document entitled *The Hague Agenda for Peace and Justice for the 21st Century*. The conference comprises both plenary sessions and many parallel-session panels and workshops, most but not all taking place within The Netherlands Congress Center. Among those speaking at the opening ceremony on 12 May is Dr John Gee, Deputy Director-General of the OPCW. His remarks dwell on the contributions that non-governmental organizations made to the creation of the CWC and on the role which they could play in the years ahead in putting pressure on non-parties to join the treaty.

CBW is not an especially prominent subject either during the proceedings or in the Hague Agenda document. On 13 May, Dr Susan Wright of UNIDIR [see 5–8 Jul 98] convenes a panel on *Biological Disarmament: The Agenda for the Next Century*. On 14 May, Human Rights Watch, the Harvard Sussex Program and the OPCW Technical Secretariat organise a panel discussion, in the Leper Room of the OPCW

Headquarters building, on *Combatting the Spread and Use of Chemical Weapons*.

**12 May** In Taipei, 1999 *The Second Asian Conference on Chemical Weapons Convention* [see 28 May 97] is organized jointly by the Industrial Development Bureau of Ministry of Economic Affairs of Taiwan and the Union Chemical Laboratories of the Industrial Technology Research Institute. There are five lectures about different aspects of the CWC given by German, Japanese, Taiwanese and US experts.

Next day, the *China Times Express* quotes unidentified military sources as saying that “to prevent the country’s economy from being battered by any UN embargo under the Convention, the Ministry of National Defence is considering permitting an arms inspection group, composed by members of the Convention’s signatories, to come to Taiwan to inspect biochemical weapons”. The Defence Ministry thereupon issues a statement rejecting any such deal, saying that Taiwan could not possibly agree to such inspection as it is not a signatory of the Convention. The statement continues: “Yet as a member of the international community, we will continue to abide by the CWC rules. We will by no means manufacture and nor will we own chemical weapons.”

Just before the conference, the country’s Industrial Development Bureau had been telling reporters that the impending restrictions on trade in Schedule 3 chemicals could profoundly affect Taiwanese imports of chemicals needed for industrial production, currently totalling some US \$6 billion. Substitution was being investigated, as it was for Schedule 2 chemicals. The latter are, according to IDB, easier to substitute, but solutions are needed more urgently (the Schedule 2 trade ban will become effective on 29 April 2000, whereas the Schedule 3 ban would begin at least two years later). During the conference it emerges that one project likely to be affected by the Schedule 3 restrictions is a joint venture between Sulzer Chemtech, based in Switzerland, and the Taiwanese specialty-chemical producer Oriental Union Chemical Corporation; this is a 40,000 metric tons/year ethanolamines project scheduled for startup in late 2000. Some 20 domestic companies use ethanolamines.

**12 May** The Holy See deposits its instrument of ratification of the Chemical Weapons Convention. In 30 days time, it will thereby become the 122nd state party to the treaty.

**12 May** In the United Kingdom, the Defence, Press & Broadcasting Advisory [D-Notice] Committee draws attention to the posting on the internet of what purports to be a list of 116 employees of MI6, which is the government’s secret intelligence service that is said to have about 2000 fulltime staff. Initially on the *Executive Intelligence Review* website of conspiracy-theorist Lyndon Larouche and soon replicated on other sites, the list of names is widely assumed, apparently because MI6 has been alleging it, to have been furnished by ex-MI6 whistleblower Richard Tomlinson [see 22 Jan], who, however, vigorously denies the charge.

**12 May** In Washington, the Potomac Institute for Policy Studies hosts the fifth in its series of six lunchtime seminars on *Countering Biological Terrorism* [see 26 Apr]. The speaker is the Secretary of the Navy, Richard Danzig, addressing possible responses to emerging strategic threats. He uses his concept of Non Explosive Warfare, this embracing chemical, biological, cyber and other such methods of attack that seek political objectives by sowing panic.

**12 May** The American Medical Association, in today's issue of its *Journal*, publishes detailed recommendations for measures to be taken by medical and public-health professionals in the event of anthrax being used as a biological weapon against a civilian population. The publication is a consensus statement by 14 specialists from the Working Group on Civilian Biodefense, organised out of the Johns Hopkins Center for Civilian Biodefense Studies [see 16–17 Feb]. In preparation are three further such sets of recommendations: on plague, smallpox and botulism.

**12 May** President Clinton sends to Congress his administration's new *21st Century Crime Bill*. He says that this will, among other things, "strengthen our efforts to combat international crime and terrorism". He continues: "The threat of weapons of mass destruction is real and increasing in an age of technological change and open borders. The bill will make it a federal crime to possess the biological agents used in such weapons without a legitimate, peaceful purpose." The proposed legislation would also make authorized handlers of such agents accountable for any misuse. Similar initiatives are in preparation in regard to nuclear and chemical weapons.

**13 May** The US Justice Department Drug Enforcement Administration publishes in final form in accordance with the *Comprehensive Methamphetamine Control Act of 1996* the Special Surveillance List for "laboratory supplies" used in the manufacture of controlled substances and listed chemicals. The List relates not only to methamphetamine but also to such other abused drugs as PCP, LSD and methcathinone that (unlike heroin or cocaine) are commonly produced domestically. The chemical precursors contained in the list include a number that are also precursors of CW agents, among them the CWC Schedule 3 chemicals phosphorus pentachloride and thionyl chloride.

**15 May** In Havana, at the start of the 4th Iberamerican Agricultural Forum, Cuban Agriculture Minister Alfredo Jordan says that seven outbreaks of new crop-disease in the island during the past four years had been deliberately introduced. As an example he cites the 1997 thrips infestation in which 7600 hectares of potato had been destroyed or seriously damaged, following, he says, US dumping of the insects there [see 15 Dec 97].

**15–16 May** In Noordwijk, the Netherlands, the Pugwash Study Group on Implementation of the CBW Conventions holds its eleventh workshop [see 28 Nov 98], on *Implications of CWC Implementation for the BWC Protocol Negotiation*. Participating are 27 people from 13 countries.

**15–20 May** In Tehran, the *First Course on Medical Defence against Chemical Weapons* is convened by the Iranian CWC National Authority, the Iranian Ministry of Health and the Janbazan Foundation in conjunction with the OPCW Technical Secretariat. Speaking during the opening ceremony, OPCW Deputy Director-General John Gee says that, in recent history, the Islamic Republic of Iran "is the only state to have been attacked on a massive scale with chemical weapons, in the war with Iraq in the 1980s". He continues: "At the political level, the reaction of the international community then to the widespread use of chemical weapons, against all international norms, was less than it should have been. With the Chemical Weapons Convention now firmly in place ... this must not occur again." Dr Gee then identifies substantial contributions made by Iran to the work of the OPCW and refers also to the "spirit of openness and transparency" with which it has cooperated with the OPCW

Secretariat. He speaks of the more than 30,000 Iranians still receiving medical treatment for mustard-gas poisoning. The course, which is presented primarily by Iranian medical experts, draws from this experience. There are also contributions from Dr Jan Willems of Belgium and from OPCW Secretariat personnel including Dr Brian Davey, head of the Health and Safety branch. Participating are professionals from 16 countries: Armenia, Belgium, Canada, Cuba, Germany, India, Indonesia, Iran, Italy, Lithuania, Malta, Panama, Romania, Saudi Arabia, Sweden and Turkey.

Simultaneously with the opening of the course is the inauguration in Tehran of the International Centre for Training in Treatment of the Victims of Chemical Warfare. Intended for the provision of emergency medical assistance to OPCW member-states in the event of CW attack, this is being offered by Iran in accordance with the assistance provisions of CWC Article X.7.

**16–20 May** In Seattle some 5700 people assemble for the annual meeting of the Biotechnology Industry Organization. There is a session on bioterrorism which includes presentations on research into potential countermeasures that is being funded by the US Defense Advanced Research Projects Agency. These include a DNA sequencing device that may be capable of identifying pathogens in a matter of seconds

**17 May** The Turkish army has been using chemical weapons these past two days in fighting in the region of Botan near the Iraq–Turkey border against guerrillas of the Kurdistan Workers Party (the PKK), according to a PKK official quoted by a radio station operated by the Islamic League Party of Iraqi Kurdistan. The broadcast does not identify the type of chemical allegedly used, but says that 20 PKK fighters were killed as a result of poisoning. Reporters are invited to inspect three guerrillas said to have been injured by the chemical weapons. A subsequent PKK broadcast speaks of the Turkish army having used Turkish-made mustard gas in early April against PKK forces in the Balk region, killing 20. The broadcast also states that the Turkish government makes chemical weapons at a factory on the outskirts of Istanbul, with French, German and Swedish assistance. The PKK also reports Turkish Army use of chemical weapons on 11 May near Sirnak in the killing of 19 guerrillas. Munition fragments recovered from the attack site and analyzed abroad reportedly contain degradation products of Agent CS.

**17 May** In Brussels, the EU Council under German presidency approves without debate a Common Position (1999/346/CFSP) aimed at promoting the adoption by the year 2000 of a legally binding instrument establishing a verification and compliance regime that will effectively strengthen the BWC. Replacing an earlier Common Position (98/197/CFSP) that had been instigated by the UK presidency [see 4 Mar 98], the new one obliges member states to promote agreement on measures "which are both central to, and essential for, an effective Protocol", these being identified in Article 3 as:

— declarations of a range of facilities and activities relevant to the Convention, *inter alia* so as to enhance transparency,  
— effective follow-up to these declarations in the form of visits, on the basis of appropriate mechanisms of random selection, so as to enhance transparency of declared facilities and activities, promote accuracy of declarations, and ensure fulfilment of declaration obligations in order to ensure further compliance with the Protocol,  
— appropriate clarification procedures supplemented, if need be, by on-site activities whenever there is an anomaly, ambiguity or omission in a declaration submitted by a State Party,

which requires such procedures. Appropriate clarification procedures shall also be followed whenever a facility meeting the criteria for declaration ought to have been declared but was not,

“— provision for rapid and effective investigations into concerns over non-compliance, including both facility and field investigations,

“— establishment of a cost-effective and independent organisation, including a small permanent staff, capable of implementing the Protocol effectively,

“— provision for specific measures in the context of Article 7 of the Protocol in order to further international cooperation and exchanges in the field of biotechnology. Such measures shall include assistance to promote the Protocol's implementation.”

Article 4 requires “contacts between Governments of Member States and industry, supported by the Commission where appropriate, with the aim of furthering understanding between representatives of the European industry and those involved in the negotiations within the [BWC] Ad Hoc Group”.

**17 May** In Washington, the Office of the Special Assistant to the Deputy Secretary of Defense for Gulf War Illnesses [see 15 Apr] releases its second annual report [see 8 Jan 98], which covers the period November 1997–November 1998. The report outlines the events that had led to the establishment of OSAGWI, summarizes its doings during its first year, and reviews the events of its second year's work, providing a recapitulation of the findings of the investigations that had been completed then.

**17–19 May** In Singapore, the ASEAN Regional Forum Senior Officials' Meeting has the Chemical Weapons Convention on its agenda as well as a variety of regional security issues.

**17–20 May** In Tulsa, Oklahoma, the 1999 *Global Demilitarization Symposium* is organized by the National Defense Industrial Association and the Joint Ordnance Commanders Group, aiming to bring together decision-makers and technology-providers working on destruction of CBW and conventional munitions around the world. There are some 400 participants principally from North America, Europe and Asia.

**18 May** In Moscow, a conference on *Chemical Weapons Destruction in Russia: Opportunities for Regional Development, Civil Society and Business* is sponsored at the Hotel Arbat by the Trust for Mutual Understanding, convened jointly by the EastWest Institute and Green Cross Russia in cooperation with Green Cross Switzerland and Global Green USA. The occasion enables representatives of regional government and of non-governmental organizations from the six regions where the seven Russian stockpiles of chemical weapons are located (Bryansk, Kirov, Kurgan, Penza, Saratov and Udmurtiya) to meet with representatives of federal government and international institutions for discussion of regional development problems affecting the Russian chemdemil programme. The first substantive presentation is by the Russian Defence Ministry director of the Federal Program for the Destruction of Chemical Weapons, General Valery Kapashin. There are also speakers from regional government in stockpile locations. Yurii Lodkin, the governor of Bryansk Oblast, which is a region tormented by fallout from the Chernobyl accident and where infrastructure development is deficient, reaffirms the commitment of his administration to the 1995 regional law that imposed a moratorium on the construction of chemdemil facilities within the oblast. There is a speaker from the European Commission, whose TACIS programme is providing Euro 10 million assistance to the

Russian chemdemil programme during the period 1997–99. Swiss government assistance, too, is described.

**18 May** The United States begins its implementation of the non-disarmament provisions of the Chemical Weapons Convention. The US Department of Commerce Bureau of Export Administration announces an interim rule revising the Export Administration Regulations to incorporate export controls necessitated by the CWC. This requires notifications and annual reports for transfers of Schedule 1 chemicals; restricts Schedule 1 exports to CWC states parties; precludes Schedule 1 re-exports; and requires end-use certificates for exports of Schedule 2 and Schedule 3 chemicals to non-parties. Reports on Schedule 1 exports during 1997 and 1998 are to be submitted by 16 August.

**18–19 May** In The Hague, the Netherlands government convenes a conference marking the *Centennial of the First International Peace Conference* within the framework of the UN Decade of International Law. Among the opening speakers is OPCW Director-General José Bustani, who portrays The Hague, one hundred years ago, as “the birthplace of chemical arms control”. Calling for universal adherence to the Chemical Weapons Convention, he identifies particular “absentees”, namely North Korea, Yugoslavia, Egypt, Iraq, Lebanon, Libya, Sudan and Syria. Israel, which has signed but not yet ratified the treaty, he describes as hesitating “to take the next logical step”. He states that “the world has become too small for chemical weapons to exist anywhere”.

**19 May** Nigeria [see 1 Dec 94] deposits its instrument of ratification of the Chemical Weapons Convention. In 30 days time, it will thereby become the 123rd state party to the treaty.

**19 May** In New York State, the Senate approves a bill making it a violent felony to manufacture, possess or use weapons of mass destruction [see also 23 Mar Nevada]. The bill now goes to the State Assembly, where its prospects are uncertain.

**19 May** The US Defense Department releases a new volume in the series it has commissioned from the Rand Corporation, *A Review of the Scientific Literature as it Pertains to Gulf War Illnesses*. The new volume reviews the literature on stress. It covers the historical body of scientific evidence on effects of stress on health in the general population as well as specific studies of stress and Gulf War veterans. The Special Assistant for Gulf War Illnesses, Dr Bernard Rostker, says: “Our veterans are experiencing real symptoms and real suffering regardless of the cause. We cannot ignore any potential sources of illness in our investigations and that includes the effects of stress.”

**19–22 May** In The Hague, a conference on *Contemporary Issues in International Law: A Century After the First Hague Peace Conference* is organised under the auspices of The Hague Joint Conferences on International Law by the TMC Asser Institut. One of the panels on the first day is on “The Role of International Organisations in Arms Reduction”. It is chaired by OPCW Confidentiality Commissioner Erik Myjer, its speakers including Serguei Batsanov of the OPCW Secretariat and Charles Duelfer of UNSCOM.

**20 May** In the US House of Representatives, a hearing on *The Threat of Bioterrorism in America: Assessing the Adequacy of the Federal Law relating to Dangerous Biological Agents* takes place before the Commerce Oversight and Investigations Subcommittee. The law in question is the Antiterrorism and Effective Death Penalty Act of 1996 with its

provision requiring rules whereby those who would send or receive specified biological agents must first register with the Centers for Disease Control and Prevention, the CDC taking steps to assure itself that the transfers are legitimate. These rules came into effect on 15 April 1997, and, as an antiterrorism measure, are now recognised as having certain loopholes, such as not extending to people who culture specified agents from natural sources.

There is FBI testimony reviewing actual cases where biological agents and toxins have been involved probably for weapons purposes but where existing law has proved inadequate. This and Justice Department testimony explains how the President's 21st Century Crime Bill [see 12 May] will improve the legal safeguards. There is also testimony from the CDC and other parts of the scientific community regarding the efficacy of the transfer rules. The Federation of American Scientists, for example, testifies in support of the principle that facilities working with pathogens or toxins should be held strictly responsible for their safe storage, proper handling, restricted access and the close monitoring of any transfer [see also 12 May President Clinton]. So does the American Society for Microbiology, which also testifies on the importance of ensuring that implementation of the principle does not encumber legitimate scientific and medical research, or clinical and diagnostic medicine for the diagnosis and treatment of infectious diseases. Both bodies put forward concrete policy suggestions.

**20–24 May** In North Korea, a team of US officials inspects the tunnel complex built into a hillside near Kumchangri, suspected of being used in a revival of the nuclear-weapons programme that had been suspended in accordance with the 1994 DPRK–US agreement [see 22 Oct 94]. Access to the site had required prolonged bilateral negotiation. In Washington on 27 May (President Clinton's special envoy to North Korea, William Perry, having arrived in Pyongyang on 25 May), the US State Department announces that the team had "found an unfinished site, the underground portion of which was an extensive empty tunnel complex". A subsequent commentary in a Japanese newspaper by the Director of North Korean Studies at the Korean Security Research Institute, Kim Gusop, observes: "For South Korea and Japan, however, the threat of weapons of mass destruction from North Korea lies more in chemical than in nuclear weapons. North Korea is devoting considerable resources to chemical weapons, which are cheaper to develop and easier to hide than nuclear weapons." He also says: "Emphasizing the inhumane nature of chemical weapons, the US, Japan and South Korea must work to bring North Korea into the Chemical Weapons Convention. I think that the dissolution of weapons of mass destruction is included in US Policy Coordinator Perry's report, but the US and Japan do not take the threat of chemical weapons as seriously as South Korea. The recommendations for policy towards North Korea must also address this threat."

**21 May** The US General Accounting Office releases a new report, *Combating Terrorism: Use of National Guard Response Teams is Unclear*. Hearings on the subject are conducted in the House of Representatives a month later by the National Security, Veterans Affairs and International Relations Subcommittee of the Committee on Governmental Reform and Oversight. Chairman Christopher Shays explains that the GAO report had been requested because, in January 2000, ten National Guard RAID (Rapid Assessment and Initial Detection) teams [see 17 Mar 98] "will join the arsenal available to states against a terrorist threat". The report records state and local officials expressing widely varying degrees of confidence that a

RAID team would arrive in time to be of real use in the critical early stages of situation assessment and agent detection, some viewing the RAID team missions as duplicative of growing state and local first-response capabilities. The GAO recommends a basic reassessment of the RAID team concept before the programme is expanded.

**24 May** In Geneva, the World Health Assembly adopts a resolution sponsored by some 27 countries, including Russia and the United States, agreeing to the "temporary retention up to not later than 2002 and subject to annual review by the World Health Assembly of the existing stocks of variola virus at the current locations — the Centers for Disease Control and Prevention, Atlanta, Georgia, United States of America, and the Russian State Centre for Research on Virology and Biotechnology, Koltsovo, Novosibirsk Region, Russian Federation — for the purpose of further international research into antiviral agents and improved vaccines, and to permit high-priority investigations of the genetic structure and pathogenesis of smallpox" [see 22 Apr]. The resolution also calls upon WHO "to appoint a new group of experts which will establish what research, if any, must be carried out in order to reach global consensus on the timing for the destruction of existing variola virus stocks". Further, "any such research shall be funded by Member States or by other national or international bodies and shall be conducted in an open and transparent manner only with the agreement and under the control of WHO".

**24 May** Sudan [see 29 Apr and 3 May] deposits its instrument of accession to the Chemical Weapons Convention. In 30 days time, it will thereby become the 124th state party to the treaty. In an accompanying declaration, Sudan states: "Firstly, the unilateral application by a state party to the Convention, runs counter to the objectives and purposes of the Convention. Secondly, the Convention must be fully and indiscriminately implemented particularly in the areas of inspection and transfer of technology for peaceful purposes. Thirdly, no restrictions incompatible with the obligations under the Convention shall be imposed. Fourthly, the OPCW is the sole international authority to determine the compliance of states parties with the provisions of the Convention."

**24 May** US Commerce Secretary William Daley expresses opposition to provisions for visits in the projected BWC verification protocol, such as those advocated by the European Union [see 17 May]. In a letter to Secretary of State Madeleine Albright later excerpted in *ASA Newsletter* he writes: "I still believe we should continue to oppose random and routine visits, including 'transparency visits'. ... Our best experts, including the intelligence community and many of those who participated in the Iraq inspections, continue to tell us that, regardless of how intrusive we make an inspection regime, there is virtually no chance of discovering biological weapons activities. They are simply too easy to move, conceal, or even sanitize within hours — without leaving a trace. ... I seriously question a negotiating strategy of attempting to mollify the most hard-line members of the Western Group. ... We have repeatedly assured US industry that we oppose random and routine on-site activities."

**24–30 May** In Ethiopia, a training course on anti-CW protection is given by OPCW experts.

**25 May** In Tashkent, the Uzbekistan–USA Joint Commission concludes its second annual session. The co-chairmen of its committee on military/security issues, who are Uzbek Defence

Minister Khikmatulla Tursunov and US Assistant Defense Secretary Edward Warner, sign an agreement on US-Uzbek cooperation "to demilitarize some objectives linked with chemical armaments and to prevent the proliferation of technologies for the production of chemical weapons". US and Uzbek officials are quoted as saying that the agreement envisages up to \$6 million in US Defense Department Cooperative Threat Reduction funding being spent on dismantling and decontaminating the Chemical Research Institute at Nukus [see 5 Jan 98 and 2 Feb 98] in Karakalpakstan, said to have been built by the USSR in 1986. Brian Moran of the CTR policy office describes the facility, which he says is "the size of a couple of football fields", as having been used to research and test chemical weapons. Its existence had first been publicly disclosed by Russian whistleblower Vil Mirzayanov, who had said it was where novel organophosphorus CW agents had been tested [see 16 Sep 92 and 2 Nov 92]. He now tells *Chemical & Engineering News* that Nukus was where binary munitions based on two of these Novichok compounds, which he identifies only as "substances 84 and A-232", had been tested prior to acceptance as weapons by the Soviet army. He says that the Nukus laboratory and field test supplies of the two agents had come primarily from Volgograd: "there was absolutely no production" at Nukus. This statement stands in contrast to what an unidentified US Defense Department official had just told the *New York Times*, that the US-Uzbek agreement would preclude the "proliferation of equipment from this pilot-scale production facility". The statement also stood in contrast to what *C&EN* had learnt from an unidentified State Department source, that "one section of the Nukus facility was of particular concern because it was thought to be a pilot-plant production site for chemical weapons". Indeed, Dr Mirzayanov had himself once spoken of batchwise production of Novichok agents at Nukus, so the *New York Times* now reports. But the *Times* also states that an OPCW inspection of the plant the year previously had concluded that the institute was not a production site. And *C&EN* reports that an OPCW inspection of the Nukus institute in February 1998 had determined that the section of the facility of such concern to the State Department in fact housed its waste-water treatment plant. *C&EN* reports, as does the *Times* (whose reporter had visited the place earlier in the year), that the facility had tested biological as well as chemical weapons.

**25 May** President Yeltsin signs a decree, *On the Structure of Federal Executive Organs*, which, among many other things, abolishes the Presidential Committee on CBW Convention Problems [see 20 Mar], transferring its functions to one of the new structures created by the decree, the Russian Agency for Munitions.

**25-27 May** At Fort Detrick, the US Army hosts an informational meeting for military physicians on its anthrax vaccine [see 5 May], so *ASA Newsletter* reports, observing that there have been "over 20 people identified with a Gulf War-like illness" since the US forces-wide Anthrax Vaccine Immunization Program (AVIP) began last year. More than a hundred physicians attend the meeting, which addresses adverse reactions to the vaccine. These range from the minor to the severe. The meeting hears that, out of 337 servicepeople vaccinated in Korea, 40 percent of the men and 70 percent of the women experienced some sort of reaction; in Hawaii, 120 out of 600 servicepeople had developed a systemic reaction after at least one of the first three AVIP injections. The question arises as to whether the Vaccine Adverse Event Reporting System is in fact capturing sufficient information about reactions to the anthrax vaccine and whether

such reactions are being taken sufficiently seriously. The Assistant Defense Secretary for Health, Dr Sue Bailey, later announces that, as of 16 June, for a total of 935 632 shots of vaccine administered, only 102 reactions had been reported, of which 14 were serious reactions.

**26 May** In Jammu and Kashmir, where conflict has been intensifying across the Line of Control, India uses weapons akin to "nerve gas bombs" in an air-strike against Kashmiri Mujahideen on the Pakistani side, according to unidentified "defence sources" reported from Islamabad. *Aviation Week* reports the use of napalm by the Indian Air Force against the 600-plus heavily armed Muslim militants it says have taken up positions in mountainous terrain on the Indian side of the Line. In Rawalpindi later, a former chief of Inter-Services Intelligence, General Hamid Gul, tells reporters that, with the capture by the Mujahideen of important positions at Kargil and the failure of Indian forces to dislodge them, "there were clear chances that India would use chemical weapons". The government of Pakistan should, he says, raise this issue at the international level, and it should also warn India that the use of chemical weapons in Kargil would be taken as full-fledged war against Pakistan.

**26 May** Estonia [see 28 Apr] deposits its instrument of ratification of the Chemical Weapons Convention. In 30 days time, it will thereby become the 125th state party to the treaty.

**26 May** In Washington, at a Global Green USA briefing on Capitol Hill, *Abolition of Chemical Weapons: An Update on Russian and American Demilitarization on the Second Anniversary of the Chemical Weapons Convention*, the director of the US Defense Department Cooperative Threat Reduction Program, Brigadier Thomas Kuenning, states that a total of \$1010.4 million in CTR (Nunn-Lugar) funds has thus far been programmed for elimination of Russian chemical weapons, and that "about \$100 million is the total for BW programs".

**26 May** In Georgia, during the *26th International Symposium on Environmental Analytical Chemistry* on Jekyll Island, there is a presentation on Environmental Terrorism, a concept that includes the use of CBW agents against crops or livestock. The presentation is by Gordon Burck of EAI Corporation.

**26-28 May** In London, delegations from the French Academy of Sciences, the UK Royal Society and the US National Academy of Sciences meet to discuss scientific issues related to biological weapons and their control that should be brought to the attention of decision-makers, so it is reported in *Chemical & Engineering News*.

**27 May** In Abidjan, President Henri Konan Bedie chairs the inaugural meeting of the National Commission on the Ban of Chemical Weapons in Côte d'Ivoire. The Commission is made up of representatives of 16 ministerial departments, and is charged with achieving nationwide the aim and objective of the CWC.

**27 May** In Moscow, the chief of the Russian Defence Ministry Ecological Security Directorate, Boris Alekseyev, speaks at a press conference about the chemical weapons on the floor of the Baltic [see 11 Feb 98]. Because the CW agents that may leak from them do not accumulate in living organisms, they do not endanger the fish resources of the Baltic. Though they may in a sense be a kind of "time bomb", he says, environmental disaster might well be caused by attempts to remove them. This view is shared, he says, by Swedish military ecologists.

Kjell Grip of the Helsinki Commission [see 19–21 Jan 94] says: “The best thing to do is to do nothing. The threat [posed by the dumped CW munitions] is mainly to fishermen who use trawlers. The weapons are so old now, if you try and pick them up, you would destroy them and spread the poison around.”

**29 May** In Viet Nam, an official of the Ministry of Labour, War Invalids and Social Affairs announces that a census is to be taken throughout the country next month of victims of Agent Orange in order to record more accurately their health, work and living conditions. The official says that the results of the census are to be used by the government to work out more relevant policies for the wellbeing of victims and to call for stronger support for them both domestically and internationally. The Chairman of the National 10–80 Committee [see 30 Oct 98], Hoang Dinh Cau, has estimated that there are nearly 79,000 victims in the country. US Ambassador Pete Peterson is quoted as saying that there could soon be US–Vietnamese collaboration in joint research into the effects of Agent Orange and other such substances.

**31 May** In The Hague there is a preparatory meeting for the *International Conference on the Assistance in the Destruction of Chemical Weapons in the Russian Federation* which, with EU funding from TACIS/Bistro resources, is to be held in Moscow on 15 June, following up last year’s conference on the same subject [see 18 May The Hague]. The organizers of the conference and experts from the Russian Defence and Economics Ministries brief OPCW delegates on the agenda and on the status of the Russian chemdemil and facility-conversion programme.

**31 May** In Havana City People’s Provincial Court, a \$181.1 billion compensation claim is lodged against the US government on behalf of 5,577 Cubans killed or injured over the past 40 years in the “dirty war” against the Cuban revolution. Listed in the claim are numerous acts of alleged US terrorism, including the planting of disease germs. The action has been brought by eight non-governmental organizations. Hearings begin on 5 July. The president of the Cuban parliament, Ricardo Alarcon, says that the case will enable Cuba to make public its arguments about the aggressive policies to which it has been subjected by Washington in the last four decades. Testifying some two weeks later, Cuban Health Minister Carlos Dotres speaks of the epidemic of haemorrhagic dengue which, in 1981, had affected 350,000 Cubans, killing 158 of them. He says that only “biological aggression” could explain the rapid and explosive nature in which the disease entered Cuba after having been known only in Asia and the Pacific regions. The day previously, Interior Ministry experts had testified about 637 assassination attempts that, according to declassified US CIA documents and a 1975 US Senate investigation, had been mounted against President Fidel Castro.

**31 May** In Colombia, the Bogotá *Semana* carries a long article about Operation Marquetalia, which the Conservative government of Guillermo Leon Valencia had launched in January 1964 to eliminate the “independent republics” that Liberal guerrillas had been establishing instead of accepting amnesties decreed by previous governments to end the *violencia* that had killed 200,000 people during 1948–62. Referring to the use of chemical weapons and also napalm during the operation that is recorded by Jacobo Arenas in his *Diary of the Marquetalia Resistance*, the article states that, although the allegation continues to be heard today from the FARC (the Revolutionary Armed Forces of Colombia, which

grew out of the resistance to the operation), officers who took part in the Operation Marquetalia flatly deny it.

**31 May–4 June** In Chile, at Punte Arenas, there is a regional workshop on implementation of the CWC, convened jointly by the Foreign Ministry, the Chilean CWC National Authority and the OPCW Technical Secretariat. It is intended for personnel of National Authorities and other institutions of OPCW member-states in the Latin American and Caribbean region.

**1 June** In South Korea the Army inaugurates its new Chemical, Biological and Radiological Defence Command, which combines existing chemical units. The *Korea Times* quotes an Army spokesman as follows: “The CBR command will be tasked with deterring North Korea from launching chemical, biological and radiological warfare. In an emergency, it will swiftly counterattack.”

**1 June** In South Africa, the Cape High Court upholds an appeal by former president P W Botha against his conviction for refusing to testify before the Truth and Reconciliation Commission on the country’s CBW programme [see 7 Jan 98]. The court holds that the legal powers of the Commission had not been in force at the time it had served the subpoena on the former president.

**1 June** The Federal German Foreign Office publishes a report on its arms control, disarmament and non-proliferation activities during 1998. Included are particulars of the 15 inspections conducted by the OPCW in Germany during the report period, 11 of which were routine inspections in the chemical industry. There is an account of German work in the BWC Ad Hoc Group, in which it is also said that Germany is aiming for a BWC Protocol supervised by a BWC Organization by Autumn 2001 at the latest. Strong support is expressed for continuation of the Australia Group since active CB-weapons proliferation is still discernible. German assistance for Russian chemdemil activities, which totalled some DM 17 million during the year, is reaffirmed.

**1 June** At the United Nations there is an emergency session of the Security Council that had been called by the Russian Permanent Representative, Ambassador Sergei Lavrov, to consider “alarming information” about chemicals that remained in the UNSCOM laboratory in Baghdad after withdrawal of UNSCOM staff immediately prior to the UK/US air-attacks of December 1998. Ambassador Lavrov had reportedly learnt of the chemicals after UNSCOM had raised the subject of what to do about the laboratory in discussions the week previously with the UN Secretary-General’s office. UNSCOM officials tell reporters that the laboratory — situated since 1994 within UNSCOM offices co-located with other UN offices at the Canal Hotel — contained equipment-calibration samples of some ten different chemical agents, including VX nerve gas, to a combined total of less than 50 milligrams, plus a litre of mustard gas taken from an Iraqi munition. UNSCOM Executive Chairman Richard Butler tells the Council that the laboratory posed no danger but that it would now be prudent to shut it down before summer power shortages damaged equipment. This he repeats in a written report to the Council next day, and recommends that an expert team be dispatched to dispose of the chemicals. Soon afterwards it is being reported in Baghdad newspapers that the chemicals had been brought in by UNSCOM in order to vilify Iraq, as by placing them on Iraqi missiles. Iraq makes it known that it will refuse to allow UNSCOM inspectors back into the country to remove the chemicals. Lengthy and complicated talks between Iraqi



officials and the office of the UN Secretary-General take place against a background of continuing discord within the UN Security Council over the future of UNSCOM [see 15 Apr]. On 24 June the Secretary-General's envoy in Iraq, Ambassador Prakash Shah finally announces in Baghdad that Iraq has agreed to allow a team of 10 or 11 "totally independent and neutral" experts into the country to remove the chemicals.

**2 June** In Uzbekistan, Vozrozhdeniye Island, once a test site and proving ground for the former Soviet biological-weapons programme [see 9 May 92, 3 Mar 98 and 30 Apr 98], is described in detail in US publications. The *New York Times* carries a special report by its correspondent Judith Miller who had visited the island earlier in the year, interviewing officials and scientists. In describing the purposes to which the island had been put, the report also draws from a soon-to-be-published paper by three Kazakhstani experts commissioned in January 1998 by the Center for Nonproliferation Studies of the Monterey Institute of International Studies. New in the *Times* report is its statement that, in the spring of 1988, scientists on the island had been ordered to take part in the destruction of the Soviet BW weapons stockpile. Attributing "American and Central Asian officials", it continues: "Working in great haste and total secrecy, the scientists in the city of Sverdlovsk [see 11 Jan] transferred hundreds of tons of anthrax bacteria ... into giant stainless-steel canisters, poured bleach into them to decontaminate the deadly pink powder, packed the canisters onto a train two dozen cars long and sent the illicit cargo almost a thousand miles across Russia and Kazakhstan to this remote island in the heart of the inland Aral Sea". Neither the *Times* article nor the Monterey study provides further information on Soviet biodefense activities, for example on whether material from such other storage sites as might have existed had been brought to the island, or on whether other disposal sites had been used as well.

The fact that the Aral Sea was now shrinking and that the island, with its BW debris, might soon become connected to the mainland, had given this past history a new salience. The *Times* reports that, at the invitation of Kazakhstan in 1995 and of Uzbekistan in 1997, "American military scientists and intelligence experts" had been travelling to the island, most recently in October 1998, to survey and to take samples. It continues: "What they have found is stunning, the experts say. Tests of soil samples from six of 11 vast burial pits show that, although the anthrax was soaked in bleach at least twice, once inside the [250-litre] containers and again after it was dumped into the sandy pits and buried for a decade under 3-to-5 feet of sand, some of the spores are still alive." Monterey says that such active infective anthrax spores had first been found on the island by US investigators in 1995.

The *Times* also reports that tests performed by US military laboratories on the sampled live anthrax spores showed that the vaccine against anthrax now being given to 2.4 million US military personnel is effective against this particular strain.

**2 June** In US courts, lawsuits continue to be filed against CNN, Time Magazine and Time-Warner Inc arising out of the Operation Tailwind reporting a year previously [see 7 May]. Robert Van Buskirk is suing for defamation, seeking \$75,000 in compensatory damages and \$100 million in punitive damages. Two former SOG personnel, suing for libel, are each seeking \$10 million in compensatory damages as well as punitive damages of ten percent of the combined and total net worth of the three corporations.

**2 June** In Canada, the preparation developed by the Department of National Defence for neutralizing (rather than adsorbing) blister and nerve gases on the skin – Reactive Skin Decontaminant Lotion — is to be marketed internationally by E-Z-EM Canada Inc, which has already completed deliveries of an initial order from the Canadian Armed Forces and has secured an order from the Netherlands.

**2–4 June** In Malta, the government joins with the OPCW Technical Secretariat in convening another regional seminar [see 12–14 Jun 96] on implementation of the CWC. It is attended by 26 representatives of 13 states parties and contracting states (Albania, Algeria, Bosnia & Herzegovina, Croatia, France, Italy, Jordan, Macedonia, Malta, Morocco, Nigeria, Sudan and Tunisia) and 3 signatory states (Azerbaijan, Chad and Uganda). There had been a roundtable discussion the day previously for personnel of the National Authority of Malta.

**3 June** In Beijing, there is a working level meeting of Chinese and Japanese officials on the question of the abandoned chemical weapons in China [see 7 May]. The Japanese Foreign Ministry had announced beforehand that the meeting would look at technical studies done by Japan, at joint on-site surveys for the current and subsequent fiscal years, and at arrangements for the cleanup; it would not be considering the draft of the impending bilateral memorandum of understanding.

**3–4 June** The European Council, meeting under German presidency in Cologne, approves the first of the CFSP instruments of common EU strategy required under the newly in-force Treaty of Amsterdam: the *Common Strategy of the European Union on Russia*. Areas of action are specified in Part II of the strategy. Under the heading 'cooperation to strengthen stability and security in Europe and beyond' the strategy states that "the EU wishes to deepen and widen cooperation with Russia and identify common responses to the security challenges in Europe and beyond through ... (c) Preventive diplomacy ... by promoting arms control and disarmament and the implementation of existing agreements, reinforcing export controls, curbing the proliferation of WMD, and supporting nuclear disarmament and CW destruction." Under 'common challenges on the European continent' the strategy states that "the European Union will, in particular, cooperate with Russia in ... (b) environment and health ... by encouraging and supporting the secure storage of nuclear and chemical waste and the safe management of spent fuel, in particular in Northwest Russia". Part III of the strategy is on specific initiatives. Under "Political and security dialogue" it states that "the Union will consider ways to give more continuity, flexibility and substance to the existing political dialogue, as instituted under the PCA [Partnership and Cooperation Agreement], and to render it more operational and effective ... the Council will consider developing a consultation mechanism, in addition to the existing troika expert level talks, with Russia, possibly involving third countries, on non-proliferation issues, as well as intensifying efforts, including through increased coordination/joint activities with third countries, in support of Russia's chemical weapons destruction. The Council will, in addition, examine the scope for Joint Actions and Common Positions concerning the safe management of biological, and chemical materials, as well as fissile materials in Russia under IAEA verification which are designated as no longer necessary for defence purposes, notably on the basis of international conventions. Particular consideration will be given to the International Science and

Technology Centre in Moscow. Work on these actions will begin by the end of 1999.”

The common strategy has an initial duration of four years, at which time it may be prolonged, renewed and adapted if necessary by the European Council. In an attached declaration the European Council recalls that, in accordance with the Treaty of Amsterdam, the Council of Ministers will act by qualified majority when adopting joint actions, common positions or any other decisions within the scope of the CFSP, on the basis of the strategy.

**3–4 June** In The Hague, the OPCW Executive Council convenes for its fifth formal meeting.

**3–5 June** In Bucharest, there is a NATO Advanced Research Workshop on *BTWC Security Implications of Human, Animal and Plant Epidemiology*. It takes place in the Cantacuzino Institute under the co-direction of the institute’s director, Marian Negut, and Graham Pearson of the United Kingdom. It has been conceived as follow-up to the Prague ARW on the problem of differentiating natural and other outbreaks of disease within the context of the Biological Weapons Convention [see 1820 Oct 98]. The focus of the workshop is on three issues: (a) international reporting of outbreaks of disease, (b) whether lists of agents or diseases are needed for such reporting, and (c) the conduct of field investigations of disease outbreaks. There are 36 participants from 13 countries (Brazil, the Czech Republic, France, Italy, the Netherlands, Norway, Poland, Romania, Slovakia, South Africa, Ukraine, the UK and the USA), including representatives of the FAO, the OIE and the WHO, and also including 11 people from the delegations of nine of the states active in the BWC Ad Hoc Group negotiations. Accounts of the proceedings and conclusions reached have since been published by Graham Pearson, most fully in Bradford University *Strengthening the Biological Weapons Convention Briefing Paper* no 23.

**4 June** In Moscow, the PIR Center publishes an interview with Lt-Gen Valentin Yevstigneyev, the deputy chief of the Russian Defence Ministry RKhB Protection Troops and head of the Ministry’s Biological Defence Department. An abbreviated version is later published in *Krasnaya Zvezda*. General Yevstigneyev begins thus: “My department was established on the authority of the 15th MOD Directorate, which in the Soviet era was in charge of developing a means of protection from BW and undertook projects to adequately respond to foreign BW development programs. In March 1992, President Yeltsin declared that Russia would give up its biological offensive programs [see 11 Apr 92] and the 15th Directorate was disbanded. A new structure included only a small part of the former Directorate staff, who made up the core of the Biological Defense Department within the Radiological, Chemical and Biological Defense Forces. I would like to point out that all officers in the new BDF have always worked solely on the development of BW defense systems. ... In comparison with past years, nowadays our department is very small. Its staff includes 30 officers, of which only 8 are biologists, while others have engineering backgrounds and work on the creation of technical methods of medical defense. ... All of these tasks are the focus of activities of the MOD Scientific Research Institute of Microbiology in Kirov [see 12 Jun 92 and 22 Sep 92]. The Institute’s structure includes two scientific centers: the Yekaterinburg Center for Military Technical Problems of Antibacterial Defense [see 15 May 98] and the Sergiev Posad Virology Center [see 20 Mar]. Only these three institutions are engaged in MOD biological programs.” He goes on to describe some of the work being done at these places and also by

particular civil institutions that are collaborating with his department, such as Novosibirsk NPO *Vektor* [see 19 Feb]. He makes no mention of any MOD biological facility at Strizhi [see 25 Feb 98].

General Yevstigneyev portrays the work of the 15th Directorate on biological weapons as having been defensive: “To develop means of protection it was necessary to make a copy, a model of offensive methods. That’s why we had to learn to cultivate pathogens, to augment the technology of its accumulation, to create some stabilizing nutrient medium to make it stable in an external environment. The next step was to create BW delivery systems, to produce vaccines, to check our biological intelligence equipment, and to determine the density of dispersion necessary in the use of such weapons. This cycle was the offensive part of the MOD program of adequate response, and in 1992 it was banned and eliminated.” General Yevstigneyev makes no mention of any biological-weapons-related work having been conducted outside the ‘MOD program of adequate response’. He says that the most dangerous of the biological agents against which the program was directed were “agents causing plague, tularemia, anthrax, brucellosis, melioidosis, smallpox, encephalitis, spotted fever, cholera, yellow fever, botulism toxins and enterotoxin B”. He continues: “Till 1992, thanks to our foreign intelligence, which procured real specimens of US biological munitions and their technical drawings, we could design real munitions: one-, two-, three-, and four-pound air bombs. We even made individual models in our laboratories, conducted natural tests on animals at a special test range on Vozrozhdeniya Island on the Aral Sea [see 2 Jun].” The US bombs had been acquired “in the early 1950’s”, he says later.

Asked by his interviewer why “the USSR didn’t start the mass production of such weapons although it had all the necessary prerequisites”, General Yevstigneyev says: “Biological weapons differ from chemical weapons since they contain bio-organisms, which cannot be stored for a long time. That’s why they were not stockpiled [but see 20 May 98], because there were no strategic reserves, except those for toxins. The Soviet leadership had no ideological basis for such experiments and tests; hence, the program was of a minor scale in comparison with nuclear and chemical weapons production and development. All experiments were conducted just *to be on the safe side*. To a certain extent it was a mere bluff on the part of our leadership. There was an order to create such weapons, but they were never taken seriously as a real offensive means and there were no plans for their use.” He suggests later that “bluff aimed at blackmailing the international community” is the current strategy of Iran and Iraq, which most likely “do not have any biological weapons but their political hierarchy is well aware of the benefits of making a stir about this issue”.

The reference to strategic reserves of toxins appears to be the first public official Russian statement that the USSR had actually stockpiled toxin weapons. However, General Yevstigneyev says later in the interview: “We could certainly have produced a biological arsenal of toxins but we didn’t stockpile them because there were no political instructions on the matter”. [Note: possibly the interviewer or the transcriber or the translator have contributed to the seeming contradiction here, since “toxin” is a word that can convey different meanings to specialists and nonspecialists. Yet it may be observed that toxins are covered by the Chemical Weapons Convention as well as the Biological Weapons Convention, and the only toxin publicly known to have been declared as a weapon to the OPCW by CWC states parties, including Russia, is ricin, which is not one of the toxins that General Yevstigneyev has just listed among the “most dangerous” biological agents.]

As to Biopreparat, the civilian arm of the old Soviet biological-weapons programme [see 6 Feb 97 and 20 May 98], General Yevstigneyev hints at an inter-relationship between the efforts of Soviet biologists to escape Lysenkoism and the military's exploitation of the dual-use potential of a biology thereby modernized. He depicts an activity less fulfilled than the one now being described by former senior figures in it, such as Kanatjan Alibekov [see 6 May]. He says: "In the early 1970's the Government issued a decree on the expansion of genetic research and a serious study of bio-technologies. Biological weapons, with all their tactical drawbacks, are the cheapest kind of WMD in terms of production. The introduction of these technologies promised a tangible economic effect with minimal investment. That's why *Bioprom* was established as a special ministry to explore these opportunities and to advance our scientific technical achievements to the level of possible mass production. Later *Bioprom* was given a new name — the Ministry of Medical Industry. And in cooperation with our institutes a number of scientific research institutes were set up in Obolensk (Moscow region), in Serpukhov (Institute of Immunology), and in Kaltsovo (Novosibirsk NPO *Vektor* or Institute of Viral Rickettsia). The possibility of creating an industrial structure for the production of offensive biological agents and their carriers was considered, but this program didn't reach its fruition. The reason for that was the political situation in the country. If it hadn't been for Gorbachev and his advisors we would have had some industrial enterprises capable of initiating mass production of BW components. We can only be relieved by the fact that this program was discontinued and wasn't fully implemented."

**4 June** In Kosovo, Serbian military forces are including poison-gas shell in an artillery and rocket offensive against Kosovo Liberation Army (KLA, or UCK) units, according to Albanian and KLA reports [see also 23 Apr]. Albanian Information Minister Musa Ulqini tells a news conference in Tirana next day that Rafshi i Dukagjinit is the area where bombardment has been heaviest, saying that the main effects of the poison gas, which "is immediately affecting the civilian population and the UCK military formations in the front", are "eye blackening, loss of sight, mental disorders, loss of equilibrium". On the day following, KLA Kosovapress reports that Serbian forces have been firing rockets and chemical weapons from a base close to Liqenit te Radoniqit throughout the last three days. Later, credence is briefly attached in the West-European press to a paper on the subject dated 17 May, written by a Belgian toxicologist, Aubin Heyndrickx, formerly of the University of Ghent, which appears to confirm Serbian use of "BZ gas and (or) analogues" and also sarin. The US Federal Bureau of Investigation is subsequently reported to have sent a team to Tirana in July to study the available evidence.

**5 June** In the United States, Federal Bureau of Investigation data on bioterror threats are presented during the annual meeting of the American Society of Microbiology, in Chicago. Special Agent R Scott Decker of the FBI Hazardous Materials Response Unit says that, through May, there had been 118 threats of possible use of biological weapons during 1999, including 100 anthrax-related threats, as compared with 112 bio-threats during all of 1998, and 22 in 1997. Biological agents and industrial chemicals are the substances the FBI takes most seriously in preparing for possible terrorist attacks even though, he says, "explosives, shootings and kidnappings will remain the preferred terrorist options".

**7 June** In Vienna, OPCW Acting Director-General John Gee addresses an international conference on chemical-weapons

destruction. His starting-point is the tendency of governments to neglect the implementation of treaties whose negotiation had once attracted their close attention: "when the garden is looked after on a regular basis it grows well, but if you leave it unattended for lengthy periods, it is likely to develop in ways that you hadn't intended originally". He then proceeds to identify several current and possible future consequences of this neglect in the case of the CWC: initial declarations that are late or incomplete; continuing absence of consensus on what to do about chemical weapons produced between 1925 and 1946 or abandoned on the territory of other states; subordination of the OPCW budget to short-term tactical objectives at odds with the longer term wellbeing of the regime; a too-slow rate of chemical-weapons destruction; laggardly attention to modalities for eliminating chemical weapons production facilities (CWPFs); and failure to safeguard the effectiveness of the Secretariat's verification work from budgetary attrition driven by the "possessor pays" principle. Throughout his account he indicates where there could be remedial initiatives by member states or where the OPCW could usefully react if duly enabled by its members.

One particularly positive development related by Dr Gee concerns CWPFs, of which 60 have now been declared by, he says, "China, France, Japan, the Russian Federation, the United States of America, the UK, and three other states parties". [Note: India, Iran and South Korea are presumably the three states that Dr Gee does not identify here: see 8 Aug 97, 17 Aug 97 and 21 Feb]. He states that all 60 CWPFs are now fully inactivated under OPCW verification, 11 having been certified as destroyed. Requests for conversion rather than destruction of five others have been or are being approved by the OPCW. He goes on: "The Secretariat estimates that as many as 20 requests for conversion of CWPFs may be submitted to the OPCW in the course of the next year. Contrary to earlier perceptions, conversion is slowly becoming a more widely accepted phenomenon. The following States Parties have already submitted and may submit additional conversion requests to the OPCW in the future: the US, the UK, the Russian Federation, and two other States Parties." Noting that the Cold War concepts that had favoured destruction over conversion may have lost relevance, he says: "I also believe that there will be both economic and political dividends from the conversion of such facilities from plants which had in the past produced deadly chemicals to plants which, for example, may contribute to mankind's efforts to protect the ozone layer or bring about mutual understanding and trust through the establishment of joint ventures."

**7 June** In Australia the Federal Parliament learns from Veterans' Affairs Minister Bruce Scott that 213 of the 1650 Australian military personnel who served in the Gulf War theatre have sought compensation for illnesses, of some 490 different sorts, from which they have since been suffering. Acknowledging that veterans had joint pain and post-traumatic stress disorder, the minister denies, however, that they suffered from a common syndrome, anything that could be described as a characteristic Gulf War illness: "My department has found that all the diseases that have been claimed by these veterans have been covered by diagnoses that do not include Gulf War illness. The department continues to actively monitor the medical literature and to be involved in scientific discussions on the nature of illnesses in Gulf War veterans." He is responding to written questions from a Western Australian Labour Party backbencher, Graham Edwards, who had said: "Both the UK and US governments have sought to understand why their veterans are now ill and it is incumbent on this government to show the same quality of care to Australian veterans". Publicity

is subsequently given to the fact that the Australian Defence Force had immunized its Persian Gulf personnel against anthrax, the vaccine being of US origin. Later, the minister announces that there is to be a health review of all Australian veterans of the Gulf War.

**7 June** In Atlanta, Georgia Gulf Corporation has disclosed in its new annual report that it has reached settlements with about 260 of the workers claiming compensation for injuries from mustard gas in September 1996 at its Plaquemine facility near Baton Rouge in Louisiana [see 28 Jul 98]. The company indicates that it expects the remaining 390 cases to be resolved soon. The size of the settlements is not public knowledge but the company report says: "Based on the present status of the proceedings, Georgia Gulf believes the liability ultimately imposed will not have a material effect on the financial position or on results of operations of Georgia Gulf." It appears that the mustard gas involved was not sulphur mustard but HN3 nitrogen mustard, tris(2-chloroethyl)amine. *Atlanta Business Chronicle* reports: "Workers were exposed when cleaners blasted pressurized water through long tubes that vent heat from the chemical reactor where [vinyl chloride monomer] is created. At the end of the tubes, a mist drifted down on 200 to 800 other cleaners." Contributing to the settlement payments have been other companies named in the compensation lawsuits, including Amoco Corporation and Louisiana Interstate Gas Company, both of which supply the Plaquemine plant with natural gas.

**7-9 June** In Vienna, the UK Defence Evaluation and Research Agency and the consulting group ICF Kaiser International host their second chemical weapons demilitarization conference and exhibition [see 23-25 Jun 98], *CWD99*. Participating are people from some 17 countries — Austria, Belgium, Canada, the Czech Republic, France, Germany, India, Italy, Japan, Kuwait, the Netherlands, Russia, Slovakia, Sweden, Switzerland, the UK and the USA — including people from two NGOs, namely Green Cross and SIPRI. Exhibiting companies and trade associations include ones from Germany, the UK and the USA. The programme includes more than 60 podium or panel presentations, those of the second and third days proceeding in parallel sessions. Speakers include the Deputy Assistant Secretary of the US Army for chemdemil, Theodor Prociw, and the head of the Chemical and Biological Disarmament Division of the Russian Ministry of Foreign Affairs, Genady Lutai. The keynote address is by the Acting Director-General of the OPCW, John Gee [see 7 Jun].

**7-15 June** In Ypenburg, at the Netherlands Defence College, another basic course for personnel of CWC National Authorities is given by the OPCW Technical Secretariat. Such support for National Authorities is one of the three programmes that constitute the Secretariat's implementation of CWC Article XI.

**7-17 June** In Salt Lake City, a US District Court hears testimony in a lawsuit filed against the US Army and its contractors, EG&G Defense Materials Inc, seeking shut-down on safety grounds of TOCDF, the chemdemil incinerator at Tooele [see 10 May]. The suit has been brought by the Sierra Club, the Vietnam Veterans of America Foundation and the Chemical Weapons Working Group. The centrepiece of the case is an incident on 30 March 1998 involving the processing of an MC-1 sarin nerve-gas bomb, as a result of which some, or none, of its payload might have been released undestroyed into the environment. A decision is not expected for at least three

months: Judge Tena Campbell requires both sides to study the trial transcript when it becomes available and then prepare their own proposed findings of fact and conclusions of law, after which she will decide whether closing arguments are needed.

**9 June** In New Zealand the inquiry led by former Governor-General Paul Reeves [see 4 Aug 98] has reportedly failed to find any certain links between exposure of veterans of the Vietnam War to herbicides and health problems in their children.

**9 June** The American Medical Association, in today's issue of its *Journal*, publishes detailed recommendations for measures to be taken by medical and public-health professionals in the event of smallpox being used as a biological weapon against a civilian population. As with an earlier set of similar recommendations regarding anthrax [see 12 May], the publication is a consensus statement by 14 specialists from the Working Group on Civilian Biodefense, organised out of the Johns Hopkins Center for Civilian Biodefense Studies. The group notes that the United States currently has enough vaccine in storage to inoculate 6-7 million people, but no manufacturer is equipped to produce large amounts more. The group recommends establishment of an emergency stockpile of at least 40 million doses, not of the present vaccine, but of one grown in tissue culture that has yet to be developed. Besides maintenance of standby manufacturing capacity, the group's recommendations also include the development of new methods of producing vaccine and vaccinia immune globulin.

**9 June** In the US House of Representatives, a hearing on *Terrorism Response Preparedness* is conducted by the Oversight, Investigations and Emergency Management Subcommittee of the Committee on Transportation and Infrastructure. Its purpose is to examine programmes of the federal government designed to assist state and local emergency officials in their preparations for nuclear or CBW terrorist attacks. The General Accounting Office testifies that the federal programmes need better focus and better direction to make them more effective. The GAO also says that it is reviewing the scientific and practical feasibility of the terrorist chemical and biological threat — specifically, the ease or difficulty for a non-state actor successfully to obtain CB agents, to process the materials, and to make and deliver CB weapons that can cause mass casualties — and plans to issue its report later in the summer.

**10 June** In Iraq, the Ministry of Agriculture accuses UNSCOM of "culturing and spreading some diseases that afflicted plants and animals throughout the years of sanctions". A release by the Iraq News Agency details the charge. The release also accuses UN de-mining teams working in Iraqi Kurdistan of having "buried and emptied sealed boxes containing eggs of a species of locust that can destroy crops".

**10 June** In the United Kingdom, hitherto secret state papers about the country's CBW preparedness during the 1950s are released into the Public Record Office. They include papers on the discovery of the V-agent nerve gases by an ICI research group in 1952, and an exchange in February of that same year between Cabinet Secretary Norman Brook and Prime Minister Winston Churchill mocking a request from the Biological Research Advisory Board for assurance that any UK use of biological weapons would be in retaliation only.

**10 June** In the United States, high over New Mexico, the tenth in a series of 13 trials of the developmental Theater

High-Altitude Area Defense (THAAD) antimissile-missile system [see 12 May 98] is, for the first time, successful in intercepting and destroying a target missile.

**11 June** In Russia the State Duma adopts a resolution *On the Unsatisfactory Implementation of the Russian Federation's Commitments to Implement the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and Their Destruction*. The resolution contains a number of specific recommendations, among them one that the president of the Russian Federation should examine the possibility of conducting a comprehensive investigation into the measures that had been envisaged in the federal legislation on ratification of the CWC [see 5 Nov 97], and that he also organise an interministerial commission for this investigation that would include representatives of the administrations of the six stockpile regions.

**11 June** The Yugoslav NBC Defence School, the Skolski Centar ABHO, founded in 1946 and by 1953 associated and co-located with the industrial chemical complex *Miloje Zakic* at Krusevac, is described in novel detail in *ASA Newsletter*.

**10–11 June** In the British Isles, the Papal Nuncio and the UK ambassador to Ireland, as well as the regulator of the UK water industry, receive letters threatening “a campaign of chemical warfare” in England unless the UK government commits itself to “total British military and political withdrawal” from Northern Ireland. The letters are from the previously unknown Republican Revenge Group and contain what are later described as plausible technical details of how water supplies would be poisoned by injection of weedkiller into fire hydrants. A large Garda Special Branch, UK Security Service and police operation, accompanied by a month-long news-media blackout organised by the UK Cabinet Office, is set in motion, and emergency planning procedures designed for this sort of contingency are brought into play.

**12 June** In Jammu and Kashmir, Indian troops use chemical weapons in artillery fire against Pakistani positions on the Line of Control, according to Pakistan Television, which says that some shells exploded about 400 metres above the ground to emit chemicals that caused suffocation and skin irritation. The broadcast described the alleged resort to chemical warfare as a sign of the Indian military's frustration at the failure of its current campaign against Kashmiri freedom fighters [see also 26 May]. Further detail is related to reporters by Pakistan army spokesman Brigadier Rashid Qureshi: “The Indians used chemical shells and we are in the process of analysing what it actually was. It was a smoke type of material that came out of the shells and causes blisters and causes itching and so far nausea.” The allegations are described by an Indian army spokesman as “absolutely baseless because they are part of a malicious Pakistani propaganda”. Kaleem Siddique, described as a leader of Hizbul Mujahedeen, one of the militant groups in Pakistan-controlled Kashmir, tells reporters that Indian forces had used similar weapons in September 1994, after they had failed to evict Kashmiri militants from an area in Srinagar. Pakistan Foreign Office spokesman Tariq Altaf says that although no “serious” cases of chemical injury have been reported, “this issue is engaging international attention”. He adds: “We are making a serious investigation”. India External Affairs Ministry spokesman J S Jassal says on television: “I would also like to emphasize ... that India is one of the founder members of the Chemical Weapons Convention. And we are a country that is known to live up very seriously to all its international obligations. If you look at the details of the [CWC]

and the obligations that countries which are signatory to it have taken, you would understand that the ... [allegation made] by Pakistan is absolutely absurd”. Indian Army spokesman Bikram Singh announces the recovery of gas masks from soldiers of the Pakistani Northern Light Infantry from the Tololing heights, which he says may indicate that Pakistan is planning to use chemical weapons. The US State Department tells reporters that it has no evidence to support the Pakistani accusation.

**13 June** UK Secret Intelligence Service [MI6] attempts to infiltrate what was believed to be an Iranian programme for acquiring chemical weapons [see 22 Jan] are further described by the London *Observer*. The description apparently draws from material furnished by former SIS employee Richard Tomlinson [see 12 May] to lawyers acting for jailed Israeli businessman Nathan Manbar who is appealing against his conviction for supplying Iran with CW-related materials. UK government lawyers are said to be seeking to suppress the story. The newspaper quotes, in addition, from the synopsis for a book which Tomlinson had been prevented from publishing in Australia. The quotation from the synopsis, already published in Tel Aviv by *Ha'aretz*, reads as follows (Tomlinson is describing an SIS assignment in 1994): “My task is to penetrate the Iranian chemical armament network in order to gain intelligence and disrupt it. Mossad, German intelligence and the Polish intelligence, CIA are all involved in this operation. Using an Argentine cover I get a job in an Anglo-Iranian trading company in Mayfair. Slowly I get to know one of the Iranian agents. Through Dutch liaison, we eavesdrop on a meeting [of] Iranian intelligence officers and their agents in Amsterdam Hilton. ... We search everybody on board the Iranians plan [*sic*] when they return to UK. On pretext of searching for drugs. The Iranian's documents are discreetly photocopied. They contains [*sic*] plans for the CW factory they are attempting to build. We discover that the Mossad are secretly helping the Iranians (amazing but true) — as part of a deal to secure the release of one of their downed pilots (Ron Arad) who been held since early eighties by Iran-sponsored Hesbollah terrorist group. Fly out to Vienna to meet Iranians for first time. I return to UK and get sack.”

**13 June** Iraq, North Korea and Russia are probably concealing stocks of smallpox virus for military use, according to a US intelligence assessment completed earlier in the year now reported in the *New York Times*. The assessment is said to have been based on “evidence that includes disclosures by a senior Soviet defector, blood samples from North Korean soldiers that show recent smallpox vaccinations and the fairly recent manufacture of smallpox vaccine by Iraq”. The newspaper states that it was this assessment that underlay the recent US decision to oppose final destruction of the two remaining WHO-recognised repositories of the virus [see 22 Apr and 24 May]. The newspaper does not, however, remind its readers that smallpox vaccine is not made from smallpox virus.

**15 June** Israeli Defence Ministry Director-General Ilan Biran speaks to reporters at the Paris air show about Israel's Arrow antimissile-missile system [see 6 Jan 98]: “Within three to six months we expect to declare the system operational. The first battery of Arrow missiles will be established in 2001 and the country's main population centres — Tel Aviv, Haifa and Jerusalem — will be covered by an interlocking system by 2005.”

**15 June** In Moscow, the Russian Ministry of Foreign Affairs hosts the second *International Conference on the Assistance in the Destruction of Chemical Weapons in the Russian Federation* [see 31 May], funded by the European Union. The keynote address is by OPCW Acting Director-General John Gee. Having reviewed the magnitude of the chemdemil task confronting Russia, he says that the OPCW has been heartened "to receive news that, in addition to existing offers from the US and some European countries [he has spoken earlier in his address of the assistance of Germany at the Gorny chemdemil site, of Sweden, Finland and the Netherlands at the Kambarka site, of the United States at Shchuch'ye, and of Italy, promised for Kizner], the European Union itself and a number of other states, such as Canada, are beginning to express a more specific interest in this problem". He notes the provision for Russian chemdemil assistance in the *Common Strategy of the EU on Russia* that the European Council had adopted recently [see 3-4 Jun], which "we are told will be translated into a concrete programme of action by the end of 1999". He adds: "Those EU institutions involved in drawing up [this] programme may wish to consider the level of assistance commensurate with that of the United States". Colonel-General Stanislav Petrov speaks of the status of implementation of the Russian chemdemil programme and of the opportunities it presents for international cooperation, a presentation later complemented by one from the Russian Economics Ministry. There are also national presentations from the Russian Federal Assembly and from existing donor countries. Here, the US presentation includes a vugraph on levels of Cooperative Threat Reduction funding for Russian chemdemil, including CWPf demilitarization, thus far spent or programmed through 2004, which shows a total of \$862.9 million. More than a hundred people participate in the conference, including representatives of 28 countries, the EU and the OPCW.

Background materials provided by Russia include particulars of three CWPf's. The particulars relating to *Khimprom* Novocheboksarsk indicate that the facilities for Russian-VX production there were completed in 1972, including facilities for production of aminomercaptan and chloroester precursors. The particulars of *Khimprom* Volgograd indicate completion of sarin production facilities there in 1959, last used in 1982, and of soman facilities in 1966, last used in 1987; they included facilities for didi-mixture precursor. The particulars of the Sredne-Voljskiy Chemical Plant at Chapaevsk, which was founded in 1912 for production of sulphuric acid, indicate completion of mustard-gas production facilities there prior to 1946, last used in 1945.

**15 June** In the United States, there is mounting political opposition to government programmes of assistance to Russia for purposes of facilitating redeployment of human resources away from weapons of mass destruction [see 22 Feb]. Such programmes include the Initiatives for Proliferation Prevention (IPP) of the Department of Energy and State Department support for the International Science and Technology Center [see 3-4 Jun Europe] in Moscow. Under the headline "Russia is using US money to build nuclear and biological weapons, for itself and such rogue states as Libya and Iran, and the White House wants to give it millions more", *The American Spectator* today publishes a lengthy criticism of the programmes. The quality and general tenor of the criticism are evident from what its author, Kenneth Timmerman [see 17 Jan 96], quoting extensively from *Biohazard* by Ken Alibek and Stephen Handelman [see 6 May], has to say about one recipient of IPP and ISTC support, the State Research Center of Virology and Biotechnology (VECTOR) [see 4 Jun] in Koltsovo: "Vector

'weaponized' new strains of smallpox at a time when the World Health Organization declared the disease eradicated worldwide. ... Vector's programs are still 'too sensitive to discuss', say former officials, who voice concern that the State Department has provided general support funds which Vector can use for whatever purpose it chooses. These funds were awarded Vector despite US government awareness that the institute is currently developing new biological weapons for the Russian military, including a new strain of German measles that creates AIDS-like symptoms in a matter of days."

**16 June** In Cyprus, government spokesman Costas Serezis tells reporters that scanning equipment has been installed at Larnaca airport and Limassol seaport capable of detecting drugs, nuclear materials and biological weapons. This announcement follows US expressions of concern that the island is being used as a transit point for weapons of mass destruction [see 29 Aug 96].

**16 June** In Moscow, on the day following the international chemdemil-assistance conference [see 15 Jun], the chief of the Russian Defence Ministry RKhB Protection Troops, Col-Gen Petrov, announces that France and the United Kingdom will provide financial assistance to Russia for the purpose of destroying chemical weapons.

**16 June** In Washington, representatives of Russia and the United States sign a protocol to continue the Cooperative Threat Reduction program in Russia through June 2006. It is a protocol to the 1992 CTR Umbrella Agreement [see 17 Jun 92].

**16 June** The US Navy has now successfully demonstrated an ability to detect CW agents using a sensor mounted on an unmanned aerial vehicle. During three months of testing in the Nevada desert, there have been eleven flights of a *Pioneer* UAV carrying a Femtometrics SAWCAD (surface acoustic wave chemical agent detector) [see 8 May 95] and a commercial off-the-shelf radio-frequency modem transmitter. The last five of these tests detected the release of a cloud of nerve-gas simulant (dimethyl methylphosphonate [see 30 Sep 98 Netherlands]), transmitting data about the cloud to a ground station.

**16 June** In the United States, research findings relating to Gulf War illness from Texas and Michigan university medical schools are published in the scientific journal *Toxicology and Applied Pharmacology*. The findings suggest that soldiers who became ill after serving in the Gulf War had a genetic trait which made them more vulnerable to certain toxic chemicals. The study draws from an investigation of health complaints in a Naval Mobile Construction Battalion [see 8 Jan 97]: 21 of the 26 sick Seabees had been found to have below average or extremely low levels of the enzyme paraoxonase type Q in their blood, an enzyme that destroys toxic organophosphates such as nerve gas or some pesticides.

**17 June** Australia describes how, in implementing the Chemical Weapons Convention, it has adjusted its export and import licensing measures so as to satisfy the requirements of the treaty, including its obligation under Article XI.2(e) to review existing regulations in the field of trade in chemicals in order to render them consistent with the object and purpose of the Convention, and including its obligation, under Article I, never under any circumstances to transfer chemical weapons to anyone or to assist, encourage or induce, in any way, anyone to engage in any activity prohibited to a state party.

**17 June** In Geneva, the representative of France addresses the Conference on Disarmament as follows: "We need to conclude the negotiations on a protocol for verification of the 1972 Convention on Biological Weapons as soon as possible. As you know, France has for many years deplored the lack of verification machinery in this Convention. However, much remains to be done if we are to attain this objective before the fifth review conference of States parties, in 2001 at the latest. France intends to meet this challenge with the other States participating in the work of the Ad Hoc Group. To be credible, this instrument should be based on a set of indispensable complementary measures, combining a system of visits with declarations and the possibility of conducting investigations. The year 1999 will be crucial. We hope that by the end of the year significant progress can be made to enable the protocol to be adopted by a special conference of the States parties in the year 2000."

**18–19 June** In Sudan there is a state visit by Libyan leader Moammar Gadhafi, his first in seven years. During talks with President Omar al-Beshir on the first day, he observes: "The targeting and plotting against Sudan have reached the extent of using intercontinental missiles to destroy a pharmaceutical plant. America is bent [on] terrorising people with missiles and sanctions." Next day he and the president tour the ruins of the El-Shifa factory that had been destroyed by US cruise-missiles [see 3 May].

**21 June** The Federated States of Micronesia deposit their instrument of ratification of the Chemical Weapons Convention. In 30 days time, Micronesia will thereby become the 126th state party to the treaty.

**21 June** The OPCW Director-General issues a Note for the impending fourth session of the Conference of the States Parties on the *Status of Submission of Initial Declarations and Notifications* by CWC states parties as of 15 June 1999. This includes identification of the states that have failed to notify the OPCW of their implementing legislation as required under Article VII, as well as the 29 states that have failed to file any sort of initial declaration as required under Articles II, IV, V and VI. Two states [Iran and South Korea, to judge from the typography of the Note] had requested that information pertaining to their declarations not be included in the Note. Declarations under Article IV (Chemical Weapons) are noted as having been received from India, Russia and the USA, but no longer from Latvia [see 20 Nov 97]; under Article V (CWPFs), from China, France, India, Japan, Russia, the UK and the USA; and, under Verification Annex Part IVB (Old and Abandoned Chemical Weapons), from Belgium, China, France, Germany, Italy, Japan, Panama and the UK. Clarification of the Panamanian declaration, submitted on 20 October 1998, is said to be being sought in relation to the reported abandoned chemical weapons. Also indicated in the Note is that Poland had made a declaration which the Secretariat interprets as a declaration of abandoned chemical weapons on its territory.

**21 June** In Germany, at the EU–US summit, President Clinton and EU leaders agree to strengthen their cooperation in four areas of relations with Russia and Ukraine. A subsequent White House factsheet identifies one of these areas as follows: "The United States is leading international efforts to marshal resources for Russia and the other New Independent States so that they can meet the needs for high priority security, arms control and nonproliferation under the Expanded Threat Reduction Initiative. The EU is a leading contributor to these efforts."

**21 June** The Oslo Paris Commission, meeting in Hull, England, continues its work on charting the northeastern Atlantic seabed to identify all dumpsites for discarded weapons, including chemical munitions. The idea of such charts had been raised the year previously by Ireland at the last ministerial meeting of the 15 Ospar member-states, in Sintra, Portugal. According to the London *Times*, Ireland is now proposing that cases where dumped munitions are caught in fishing nets or washed ashore should be reported annually to the Commission, whose secretariat is based in London, and made public.

**21 June** The US Centers for Disease Control and Prevention are preparing to award \$41 million in grants to individual states, all 50 of which have applied, to develop state systems for responding to bioterrorism. The Wisconsin application seeks \$2.5 million for five activities, according to State Chief Medical Officer Jeffrey Davis, reported in the Milwaukee *Business Journal* thus: "coordinate all key state and local agencies to develop a uniform plan for dealing with acts or threats of bioterrorism; improve public health agencies' ability to detect and respond rapidly to unusual communicable diseases, whether or not they are related to bioterrorism; improve local and state laboratories' abilities to detect and contain biologic agents used in a terrorist attack; develop laboratory capabilities to detect and contain chemical agents used in an attack; and create a statewide health alert network to coordinate communication, education and training among state and local health departments, hospitals, clinics and other agencies that respond to public health emergencies." Dr Davis also says that these improvements to the public health system would apply not only to bioterrorism but also in building an infrastructure that can respond rapidly to any communicable and infectious diseases. Milwaukee Health Commissioner Seth Foldy observes: "If there is an actual act of bioterrorism in our community, it would be our disease surveillance that likely would sound the first alarm."

**22 June** In Japan, six senior Aum Shinrikyo cultists are ordered by Yokohama District Court to pay some \$164,000 to lawyer Tara Takimoto in compensation for successive attempts on his life. These had involved pouring sarin nerve-gas into a vent on his car in May 1994 and, later in that same year, the smearing of his car door-handle with VX and the spiking of drinks with botulinal toxin.

**22 June** In the United Nations Security Council, the UK and the Netherlands introduce their long discussed draft resolution on Iraq. The resolution would modify the regime of sanctions and, in order to verify the compliance of Iraq with its WMD disarmament and nonarmament obligations, would establish a UN Commission on Inspections and Monitoring (UNCIM) [see also 15 Apr] in place of UNSCOM. The United States has already indicated broad support, but Russia and China both want the sanctions lifted in order to create an incentive for Iraq. Russia says the UK–Dutch proposals would cause a "deterioration". Iraq, in statements some days later by Vice-President Taha Yassin Ramadan and Deputy Prime Minister Tareq Aziz, categorically rejects the proposals. The Council continues its discussion both of the new draft and of the earlier Russian–Chinese–French draft, and further proposals are contained in a subsequent French working-paper that draws from both draft resolutions. But the deadlock within the Council remains unresolved.

**22 June** In the United States, federal government officials and associated academics have been drawing attention to the

vulnerability of the country to bioterrorism targeted on the country's agriculture and livestock industry [see also 26 May], in several cases offering specific prescriptions for attack. FBI special assistant Drew Richardson is quoted thus: "We're incredibly vulnerable. I personally think we have little ability to prevent anything. We can only hope to respond." Among several others offering their views to reporters is David Huxsoll, now of Louisiana State University, who observes: "There was a national effort [on terrorism] but the USDA and agriculture got left out. Now it's catch-up."

**22–25 June** In Geneva there is an international workshop on *Developing and Strengthening National Legislation and Policies for Sound Management of Chemicals*. The OPCW Technical Secretariat has joined with the UN Institute for Training and Research (UNITAR), the Inter-Organization Programme for the Sound Management of Chemicals (IOMC) and the Intergovernmental Forum on Chemical Safety (IFCS) in organizing this meeting, which it sees as a contribution to its implementation of CWC Article XI. Some 90 people attend, 17 of them being actively involved in CWC implementation. The OPCW Secretariat subsequently publishes summary accounts of the proceedings. The final document is being produced by UNITAR.

**23 June** In Taiwan, the Industrial Development Bureau tells reporters that the US government has notified Taipei that, as part of a bilateral trade agreement, it would be transferring technology to Taiwan for manufacture of CWC Schedule 2 chemicals. After April 2000, states not parties to the CWC will be unable to import such chemicals from states parties [see also 12 May].

**23 June** In The Hague, the OPCW Executive Council convenes for its sixth formal meeting [see 3–4 Jun] in order to resolve outstanding issues for submission to the impending fourth session of the Conference of the States Parties.

**23 June** In California, at the Twentynine Palms base of the US Marine Corps, a court martial finds Lance Corporal Jason Austin guilty of disobeying a lawful order by refusing to take an anthrax vaccination; his is the third of five such cases before this particular court. Like his two fellows before him, he is sentenced to 30 days in the brig and will then receive a bad-conduct discharge. Some 200 service personnel have now refused injections under the compulsory forces-wide Anthrax Vaccine Immunization Program, fearing adverse health reaction [see 25–27 May] or simply objecting to loss of control over what gets put into their bodies. Moreover, other personnel are resigning from the services rather than refuse orders to take the vaccine.

**24 June** Australia submits a "non-paper" to the OPCW Conference of the States Parties about industry verification and the question of routine inspection of Schedule 3 and unscheduled Discrete Organic Chemical (DOC) facilities. It advocates "equitable geographic distribution" as the prime determinant of how such facilities should be chosen for inspection, as by developing, among other possibilities, a selection process in which the probability of a state party becoming selected for such inspection is related to the square root of its theoretical inspection limit.

Explaining this position, the non-paper says: "In considering the risk to the object and purpose of the Convention posed by the various types of industry facilities, it is useful to consider recent trends in chemical weapons (CW) proliferation. When Iraq began its CW production program, it was able to obtain

some chemicals, including Schedule 2 precursor chemicals such as thiodiglycol and dimethyl methylphosphonate, on the international chemical market. However, Iraq also purchased DOC production facilities (typically pesticide production plants) and used these for domestic production of CW agents. In the late 1980s, when it became more difficult for Iraq to import chemicals relevant to CW production, Iraq started developing Schedule 3 facilities (producing, inter alia, thionyl chloride, phosphorus trichloride and trimethyl phosphite) to supply the precursors required for its weapons program. We understand that other countries of CW proliferation concern have followed a similar pattern, developing apparently legitimate Schedule 3 and DOC production facilities and then diverting the output to CW programs. Australia's efforts since the late 1980s to have Schedule 3 and DOC facilities covered by the Convention's routine verification provisions stem from these historical antecedents. In Australia's view, verification efforts under the Convention should eventually focus in a much more global way on Schedule 3 and DOC facilities, with considerably less resources allocated to inspections of Schedule 1 and Schedule 2 facilities."

**24 June** In Havana, Cuban Foreign Ministry spokesman Alejandro Gonzalez states at his weekly news conference that no one in Cuba has ever thought of manufacturing or storing CBW weapons because this would be a radical deviation from the Cuban defensive concept. He is reacting to publicity given in the Florida press, led by the Miami *El Nuovo Herald*, to the passage about an active Cuban BW programme contained in *Biohazard* by Ken Alibek and Stephen Handelman [see 6 May], which he suggests had been reaction to the lawsuit recently filed against the United States [see 1 Jun]. US government officials, too, are reportedly sceptical of the allegation.

**24 June** In Baltimore, a symposium *Bioterrorism: Media Hype or a Real Threat* forms part of the programme of the 26th annual education conference and international meeting of the Association for Professionals in Infection Control and Epidemiology [see 13 Apr] in which more than 3,000 people are participating.

**25 June** In North Korea, a Pyongyang radio commentary states that the USA is waiting for an opportunity to invade the country. It relates atrocity stories from the war of 1950–53, repeating, in detail rarely heard since that time, allegations of US biological warfare [see 25 Mar]. It says: "Today, our people and army are consolidating the do-or-die resolve that they will have to fight against the US imperialists at least once some time in the future ... Our army and people are also equipped with a perfect combat mobilization position"

**25 June** In The Hague, the OPCW Technical Secretariat announces that it has agreed to make four of its inspectors available to the United Nations, at the request of the Secretary-General, to assist in the closure of the UNSCOM chemical laboratory in the Baghdad Monitoring and Verification Centre in Iraq [see 1 Jun]. In reaching this decision, OPCW Director-General Jose Bustani had earlier in the day convened an informal meeting of the OPCW Executive Council. He later publishes pertinent correspondence between himself and the UN Under-Secretary-General for Disarmament Affairs, Jayantha Dhanapala. None of the OPCW personnel nominated for the team — Dirk van Niekerk of South Africa, Serguei Orolv of Russia, Mirosław Miklasz of Poland and Hua Li of China — has had any prior UNSCOM connections.



**25 June** The OPCW Director-General announces the results of the fifth official proficiency test, in which 20 laboratories from 17 member states had participated during 3–26 December 1998. The test concerns the designation of laboratories for analysis of samples. Of the 20 participating laboratories, 14 satisfied the criteria that been adopted for the test and could therefore be scored; 10 of them (from China, the Czech Republic, France, Germany, India, Japan, Russia, Singapore, Sweden and the UK) identified all the spike chemicals and reported satisfactorily.

**25 June** President Clinton issues the long awaited executive order [see 5 Feb] on implementation of the Chemical Weapons Convention in the United States and of the Chemical Weapons Convention Implementation Act [see 19 Oct 98]. Executive Order 13128 designates the Department of State as the US National Authority, which is to coordinate implementation with an interagency group of specified membership. The way is now clear for the Department of Commerce to issue the further regulations [see 18 May] detailing the implementation procedures for the country's chemical industry. Once the White House Office of Management and Budget has completed the review of these proposed regulations on which it is currently engaged and the Commerce Department has then published them, the subsequent procedures of public comment, review of the comments, revision of the draft regulations, Congressional review and publication of the final rules might take some six months to complete, whereupon industry would then have 90 days to submit information required for the initial US industry declarations. The United States can thus not be expected to come into compliance with the CWC much before April 2000.

**26 June** In Maryland, at Aberdeen Proving Ground, the US Army conducts a ground-breaking ceremony for ABCDF (Aberdeen Chemical Agent Disposal Facility), the non-incinerative chemdemil facility [see 22 Feb] that is to be built for destruction of the 1623 tons of mustard gas stored in the Edgewood Area there. The ceremony includes dedication of the facility to the late John B Samuel, a chemist who had worked at Edgewood for 28 years, latterly on chemdemil methods other than incineration.

**26–27 June** In The Hague, the OPCW Technical Secretariat hosts the first annual joint meeting of CWC National Authorities and representatives of chemical industry. The event serves several purposes, described as follows by the head of the Secretariat's Government Relations and Political Affairs Branch: "to complement the ongoing efforts of the Secretariat to build the capacity of National Authorities; to draw upon the opinions of chemical industry associations; to promote cooperation amongst National Authorities and chemical industry associations; to facilitate exchanges of information and experiences; to promote transparency; and to develop useful synergy in areas relevant to the national implementation of the Convention". The meeting attracts wide participation. In addition to people from local embassies there are 93 people from National Authorities and 27 people from industry, representing 78 states parties in all. Initially there are separate closed sessions for the National Authorities and for the industry representatives. These are followed by mixed sessions. There are Secretariat presentations, background papers and fact sheets (including one produced in collaboration with the Harvard Sussex Program), complementing a detailed opening address by OPCW Deputy Director-General John Gee. Among the papers submitted by participants is a discussion paper from CEFIC for the European chemical industry, a presentation from the Japan Chemical Industry Association and contributions

from the National Authorities of Australia, Bangladesh, Chile, Cuba, the Czech Republic, Japan, Pakistan, Sweden and Switzerland.

**27 June** UN Secretary-General Kofi Annan responds as follows when asked during an interview on UK television about the allegation that the United States exploited UNSCOM inspections to spy on Iraq [see 22 Mar]: "I think there was a measure of justification in those allegations and Washington never denied it. That ... was worrisome because it not only undermined UNSCOM but it could undermine future disarmament regimes. The suspicion will always be there: 'Are they coming to disarm or are they coming to spy'."

**28 June** The EU presidency, in the person of the Commissioner of the Federal German Government for Disarmament and Arms Control, Ambassador Klaus Neubert, addresses the OPCW Conference of the States Parties on behalf of the EU and associated countries. Reviewing a succession of issues, he deplores the failure of an unnamed "State Party with a major chemical industry" to submit its industrial declarations and open its industry to routine inspection. This, he says, "has led in 1998 to 64 per cent of schedule 2 inspections and 54 per cent of schedule 3 inspections being carried out in Member States of the European Union

**28 June** The United States Special Negotiator for Biological and Chemical Weapons Issues, Donald Mahley, during his address to the OPCW Conference of the States Parties during the general debate, observes that "74 percent of all inspector activity in terms of inspector days has been carried out in the United States". Earlier in his address he had said: "We will continue to avail ourselves of the procedures set forth in Article IX to consult with and seek clarifications from states parties as appropriate. Based on declarations submitted, the United States has now held bilateral consultations with several states parties. Our ability in a number of cases to achieve satisfactory resolution of outstanding issues is testimony to the value of this process." Next day, during debate on the Status of Implementation of the Convention, the US delegation amplifies this statement, observing that although in several cases "bilateral cooperation has successfully addressed our concerns ... in other cases the questions remain unaddressed". The delegation also notes that only 22 states parties have thus far requested information from the Technical Secretariat concerning declarations of military capability under Articles IV and V.

**28 June** Switzerland, in the address by the head of its delegation to the OPCW Conference of the States Parties, Heinrich Reimann, proposes a way for advancing implementation of CWC Article XI: "the constitution by the Organisation, and most appropriately its Executive Council, of an open-ended, consultative working group with a precise mandate and agenda". Dr Reimann continues: "Its possible tasks could be on the one hand to establish an inventory of measures already implemented by the OPCW and individual states parties in that field and showing where a need for further action by the OPCW emerges. On the other hand it could also serve as a forum for the informal exchange of views of delegations and of the Technical Secretariat on information and proposals related to the field of international co-operation, so that a continuous structure would be available to work out concrete proposals and recommendations to be submitted to the Executive Council."

**28 June** In the US Senate the Foreign Relations Committee conducts a hearing to consider the nomination of former ACDA Director John Holum for the new post of Under Secretary of State for Arms Control and International Security Affairs. On CBW matters, which are not prominent during the hearing, Holum says that he thinks biological weapons are a "very major concern". He also says that the administration is satisfied with the CWC implementing legislation [see 25 Jun] and plans to implement it "as written by the Congress".

**28 June–2 July** In The Hague the OPCW Conference of the States Parties reconvenes [see 16–20 Nov 98] for its fourth session. Participating are 547 people from 102 of the 126 member states, 14 signatory states, 1 non-signatory state (Libya), 4 international organizations (the CTBTO, the IAEA, UNEP and the UN) and 8 industry and other non-governmental organizations (including the Harvard Sussex Program). Proceedings in fact continue into the Saturday after the scheduled closure. [For further details see *Progress in The Hague*, above] The Fifth Session is scheduled for 15-19 May 2000.

**28 June–23 July** In Geneva, the Ad Hoc Group of states parties to the Biological Weapons Convention reconvenes [see 28 Mar–9 Apr] for its fifteenth 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 55 states parties and 4 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 Sixteenth Session is scheduled for 13 September–8 October. [For further details see *Progress in Geneva*, above]

**29 June** Iran, in a wide-ranging address by the Director General of its Ministry of Foreign Affairs, Ambassador Mohammad Alborzi, to the fourth session of the OPCW Conference of the States Parties [see 28 Jun–2 Jul], recalls the proposal presented at the third session by Cuba, Iran and Pakistan aimed at fostering international cooperation for peaceful purposes in the field of chemical activities [see 16-20 Nov 98] and, in this context, says of the Australia Group: "in the absence of a strong political will on the part of the Group to waive the luxury of being a private club in the interest of strengthening the Convention, we urge and encourage the Australia Group to take concrete measures of transparency coupled with a time framed program of submitting to the exclusive discretion of the OPCW in the field of chemical trade. We invite the Director General to initiate with the help of the interested and concerned parties to search for a satisfactory solution."

**29 June** Vietnam, which is participating for the first time in the OPCW Conference of the States Parties, is represented at its fourth session by Industry Deputy Minister Le Quoc Khanh, who speaks to the conference about the national body his government has established to implement the CWC and its expectation of receiving international assistance to that end.

**29 June** The EU presidency, in the person of German State Secretary Wolfgang Ischinger, addresses the BWC Ad Hoc Group in Geneva on behalf of the 15 EU member states, the 10 EU-associated countries of central and eastern Europe, and Cyprus, Iceland and Liechtenstein. He states the common position agreed by the EU Council under German presidency

[see 17 May] aimed at promoting the successful completion of substantive work in the Group by the end of 1999. He says: "While recognising and appreciating the impressive progress already achieved in these negotiations, we firmly believe that unless we can achieve decisive progress now, we might risk stagnation or even retrogression".

**29 June** The OPCW Director-General announces the designation of five new laboratories for the analysis of authentic samples: in the Czech Republic, the Research Institute of Organic Syntheses, Centre of Ecology, Toxicology and Analytics; in France, the DGA Centre d'Etudes du Bouchet; in Germany, the Chemisches Zentrallabor Wehrwissenschaftliches Institut für Schutztechnologien – ABC-Schutz; in Poland, the Analytical Laboratory for CWC Verification, Military Institute of Chemistry and Radiometry; and in the UK, DERA/CBD Porton Down. The Director-General also announces that the seven already designated laboratories will retain their designations: in China, the Laboratory of Analytical Chemistry, Research Institute of Chemical Defence; in Finland, the Finnish Institute for Verification of the CWC; in South Korea, the GSRDC-4 Laboratory, Agency for Defence Development; in the Netherlands, the TNO Prins Maurits Laboratory; in Sweden, the NBC Defence division of the Swedish Defence Research Establishment; and in the United States, the AMC Treaty Laboratory, Edgewood Area, Aberdeen Proving Ground.

**29 June** In Arlington, Virginia, the Potomac Institute for Policy Studies releases its report on *Countering Biological Terrorism in the US: An Understanding of Issues and Status* [see 12 May]. Institute publicity states that the "determination of the report is that biological weapons pose a significant and increasing risk, and that the national security strategy of the United States is inadequate and inappropriate to counter this type of attack".

**30 June** The UK Home Office informs the House of Commons that the Hertfordshire Constabulary has commissioned some private research into the use of pelargonic acid vanillylamide (PAVA) [see 5 Apr] as a potential incapacitant spray; the Police Scientific Development Branch is not at present investigating the agent.

**30 June** In New York, the term of office of Ambassador Richard Butler as UNSCOM Executive Chairman comes to an end [see 4 Feb]. He will be moving to the Council on Foreign Relations as diplomat-in-residence, and reportedly plans to write a book on his experiences with UNSCOM and the disarming of Iraq. His successor at UNSCOM has yet to be appointed. His deputy, Charles Duelfer of the United States, will head the Commission during the interim.

**30 June** In the US House of Representatives, oversight hearings on the Defense Department's force-wide Anthrax Vaccine Immunization Program (AVIP) [see 23 Jun] continue [see 29 Apr] before the National Security, Veterans' Affairs and International Relations Subcommittee of the Government Reform Committee. The inquiry now focuses on the contractual relationship between the Defense Department and its sole-source provider of anthrax vaccine, BioPort Corporation [see 25 Sep 98] of Lansing, Michigan. During his opening statement, Chairman Christopher Shays observes: "Just nine months ago, the Department of Defense awarded a \$29 million contract to the BioPort Corporation based on the company's business plan, optimistic cash flow projections, and promises to fix longstanding quality problems at the production facility.

Today, the plant remains closed, costs far exceed estimates, and revenues are below expectations. Facing a financial crisis, the company has requested extraordinary relief from DoD in the form of a \$10 million advance to pay off creditors, a substantial per-dose price increase and the right to sell up to 20 percent of vaccine production on the private market. In short, in order to maintain any production capability for its own needs, DoD must pay more money for less vaccine, while BioPort sells more vaccine to get more money. What happened? How did DoD so misjudge the capacity of the sole vaccine provider to perform essential contractual obligations? How did BioPort so miscalculate the time and cost to bring a state-run facility into the notoriously difficult world of commercial vaccine production?" Testimony is received from the General Accounting Office, which had been asked by the subcommittee to review the anthrax-vaccine contracts, BioPort Corporation, and the Defense Department. BioPort is seeking to raise the cost of the price-per-dose from \$3 to \$10–12. The Defense Department has enough vaccine stockpiled to run AVIP until August 2000.

**30 June** Panamanian sovereignty over Fort Sherman, which is the last remaining US military base on the Atlantic coast of Panama, is formally ceded by the US government. In the course of the ceremony, President Balladares refers to the 3175 hectares of territory in the former US Canal Zone where military debris, including unexploded ordnance and chemical munitions [see 10 Nov 98 and 19 Nov 98], has not yet been cleared in accordance with the provisions of the 1977 Panama Canal Treaty. An estimated 3000 or more unexploded chemical munitions remain on San José Island [see 31 Jul 98], about 60 miles south of Panama City, but the US position reportedly is that, even under the Chemical Weapons Convention, it has no obligation to clear these abandoned chemical weapons [see also 21 Jun].

**1 July** From Albuquerque, New Mexico, the US Air Force research project known as Agent Defeat, which is exploring concepts for weapons capable of destroying underground stockpiles of CBW weapons [see 29 Apr], is detailed in the *Wall Street Journal*, partly in order, so Maj-Gen Thomas Neary says, "to advertise to a future aggressor" that the project exists. The project is set to end later in the year when the research team, at Kirtland Air Force Base, completes its recommendations on which of the 58 different weapon concepts it has been examining for the past four years should enter the development process. The list of candidate concepts has now been reduced to eight that seem viable, affordable and effective, six of which involve new technologies.

**2 July** In Moscow the Presidential Committee on CBW Convention Problems announces publication of the first issue of a new periodical, *Federal and Regional Problems of the Chemical Weapons Disposal*. The head of the committee's information-analytical group, Yuriy Drozhzhin, says that the new periodical has been prepared by the All-Russian Institute of Scientific and Technical Information of the Russian Academy of Science and the Russian Ministry of Science and Technology, and that it "was commissioned by directors of the federal target programme for destroying the stocks of Russian chemical weapons, with participation of many other departments and organizations as well as the country's leading nongovernmental organizations". Tass news agency reports that the publication contains expert examination of "legislative, informational, technical and industrial aspects of destruction of chemical weapons; the prevention of emergency situations; issues of safety; medical and health care provision connected

with it; as well as the role, the place, and results being achieved by public organizations in this process".

**2 July** The OPCW publishes its second annual report on implementation of the CWC, this one covering calendar year 1998 and presented as a document for the Fourth Session of the Conference of the States Parties [see 28 Jun–2 Jul]. Much information is contained in its 75 pages, its authors observing that, in 1998, "the international community was, for the first time, able to obtain a realistic estimate of the magnitude of the task which it pledged to achieve when the Convention entered into force in 1997 — to rid the world of chemical weapons". The report continues: "With the submission of the initial declaration by the Russian Federation on 3 January 1998, four States Parties to the Convention — India, the Russian Federation, the United States of America, and one other — had, since the entry into force of the Convention, declared the existence on their territory of stocks of chemical weapons whose total declared weight was about 75,000 tonnes of CW agents. [...] A total of nine States Parties — China, France, India, Iran (Islamic Republic of), Japan, the Russian Federation, the United Kingdom of Great Britain and Northern Ireland, the United States of America, and one other — had made declarations of either present and/or past capabilities to produce chemical weapons at 59 declared chemical weapons production facilities (CWPFs). The CWPF in Japan called Satian No 7 was owned by a religious sect, and not by the Government of Japan. [...] Six States Parties [Belgium, France, Germany, Italy, Japan and the UK] submitted declarations of old chemical weapons (OCW) on their territory, while three States Parties — China, Italy and Panama — submitted declarations of abandoned chemical weapons (ACW) on their territory. [...] Japan made a declaration of abandoned chemical weapons on the territory of another State Party." Of the 24 Schedule 1 facilities declared by 19 states parties, 8 were single small-scale facilities (SSSFs), 15 were facilities for protective purposes (FPPs) and one was a facility for medical, research and pharmaceutical purposes (MRPhP). There is no mention in the report of information declared by states parties on their "riot control agents" or chemical weapons development facilities.

**5 July** From Hanoi, 14 blood samples recently taken from Vietnamese persons thought to have been exposed to Agent Orange during the Vietnam War are flown out of the country for analysis in Germany. In charge of them is Arnold Schecter [see 21 Nov 97], professor of environmental sciences at the University of Texas. The samples had been collected during joint US–Vietnamese fieldwork that had commenced in March, aimed at determining impacts of the herbicide on the health of exposed populations and possibly the precursor of a larger investigation funded by the US Congress [see 29 May]. Samples gathered during earlier fieldwork had been confiscated by Vietnamese officials [see 20 Jun 95].

**5 July** In Tirana, Albanian Deputy Defence Minister Ilir Bocka welcomes a visiting team of Swiss military chemical experts, which is providing assistance in managing, collecting and eliminating chemicals in accordance with Albanian obligations under the Chemical Weapons Convention [see also 21 Aug 98]. The minister expresses gratitude to Switzerland for its technical and financial aid.

**5 July** In Washington, a detailed report on bioterrorism in *Chemical & Engineering News* quotes the Federal Bureau of Investigation. The acting FBI section chief for domestic terrorism, Robert Blitzer, had testified before Congress some three years previously [see 12 Mar 96] that there was "no

intelligence that state sponsors of terrorism, international terrorist groups, or domestic terrorist groups are currently planning to use these deadly weapons in the US". This, according to FBI Spokesman Steven Barry, "still holds true today", but the agency is "always concerned about the intentions of the lone individual not associated with any known international or domestic terrorist group".

**6 July** In Iraq the Foreign Ministry issues a statement accusing a New Zealander employed in UN mine-clearing operations in Kurdistan of having buried there, on 8 April, several boxes of locust eggs so as "to cause severe harm to Iraqi agriculture and to vandalize its economy" [see also 10 Jun]. Notwithstanding UN efforts, the accused man, Ian Broughton, is expelled from the country. President Saddam Hussein speaks of the affair at some length during a speech at a Baath party meeting, charging the United Nations with launching a biological war on Iraq: "The shameful behaviour of UN employees means biological war in every sense of the word. They are falsely bearing the banner of fighting against biological war, and are the ones who own and use weapons of mass destruction and then accuse others of violating international law, while they themselves launched a biological war on Iraq, spreading new diseases that never existed in Iraq before the war."

**7 July** In Kazakhstan, the director of the Stepnogorsk National Center for Biotechnology [see 30 Jun 98], Gennadiy Lepeshkin [see 23 Dec 97], has met with representatives of the US Defense and Energy Departments and of the University of New Mexico Biology Department to establish a research station on the Kazakhstani region near the Aral Sea for purposes of animal, human and environmental surveillance. The announcement of this on ProMED-mail continues: "Among other things, we hope to address the question of future impact of the anthrax stocks buried there [see 2 Jun] and bring scientific data to enlighten the debate on measures that might be taken to limit environmental hazard from anthrax or other materials that may be buried on Vozrojdenia Island. In addition, Director Lepyoshkin and the political leadership of NCB is strongly supportive of this research as a means to strengthen implementation of the Biological Weapons Convention. We intend to make all research available through a website (probably based at NCB in Stepnogorsk) as the Center is determined to enhance transparency in all aspects of its biological research."

**7 July** In White Rock, New Mexico, officials of Los Alamos National Laboratory speak at a town meeting in defence of projected trials of BW-agent detection equipment that would involve releases of clouds of *Bacillus globigii* spores simulating anthrax spores. The trials had been postponed because of local concerns about safety, which are not, however, allayed by the officials at this meeting. Next day it is announced that the tests will be conducted elsewhere.

**8 July** In Kazakhstan, the head of the regional Public Health Board for Aktyubinsk region, Zhumamurat Aldashev, announces that a young boy in the settlement of Murunkum has been hospitalized with bubonic plague, and that 18 residents of the settlement and 78 residents of Aralsk who had contact with him have also been hospitalized, though they show no signs of plague. Posting this report soon afterwards on ProMED-mail, the moderator comments as follows: "Kazakhstan has several endemic foci of plague, so on the face of it this is not an abnormal case. However, the reaction of the authorities in hospitalizing so many asymptomatic people suggests

something is abnormal. Aralsk is situated on what used to be the shore of the Aral Sea, now almost dry and the location of the dumping ground for Soviet anthrax weapons and other nasty material [see 7 Jul]."

**8 July** In the United Kingdom, the independent Police Complaints Authority publishes its annual report to Parliament for 1 April 1998 through 31 March 1999. The report contains analysis of 476 complaints made during the report period concerning use of the new CS-spray weapon [see 29 Dec 98]. It includes this: "Just over half the complaints analyzed related to the use of CS spray in enclosed spaces as opposed to outside in the open air. Many of these incidents took place in people's homes, also in public houses or clubs and in police stations. A number of complaints involved CS being sprayed into cars and vans. Another trigger for complaints seems to be the use of CS spray as a method of restraint or control as opposed to the police defending themselves. Although this can be a legitimate use of CS spray, the spray was introduced primarily for use by officers in self-defence. We found that in 44 per cent of incidents complained of the spray had not been used in self-defence. It had been used in a variety of ways to contain situations: where people were still struggling, having been restrained; where there was a perceived threat of violence; to stop people interfering with another's arrest; and, in one or two cases, to prevent suspects running away. A major concern has always been the safety of CS spray. Of the small sample of complaints so far analyzed, less than 10 per cent involved injury other than normal side effects which wear off within a few hours. None has yet been proved to have caused permanent damage. Significantly in only one case, where the complainants asthma was exacerbated, was the harm caused by the CS itself. Medical opinion suggests that the harm in all other cases was caused by the solvent in the spray." The report recommends research into the possibility of a causal connection between the use of CS spray and death due to positional asphyxia, and also into possible interactions between CS spray and anti-psychotic medication.

**10 July** In Dublin a man is detained under anti-terrorist legislation in connection with the threat to poison UK water supplies a month previously [see 10–11 Jun]. Details of the threat and of the joint Anglo-Irish countermeasures it had set in motion, including activation of the UK government's civil contingency unit, are now released to the news media, having hitherto been withheld lest they stimulated copycat threats or caused panic. An unidentified UK Cabinet Office spokesman says: "The overriding consideration for the government, the police and the water industry was public safety. An immediate public warning would be issued if necessary, but there was no need to do so."

**12–17 July** In Pakistan, which has requested such assistance under Article X.5 of the Chemical Weapons Convention, a training course on anti-CW protection is given by a team of six OPCW experts at the Army School of Logistics in Kuldana, near Islamabad. It is the second [see 24–30 May] of three such courses being arranged by the Secretariat in 1999.

**13 July** President Clinton transmits to the Congress a 6-month report on the national emergency declared by Executive Order 12938 of 14 November 1994 in response to the threat posed by proliferation of nuclear and CBW weapons and the means of delivering such weapons [see 12 Nov 96 and 21 Jul 98]. The White House next day issues a fact sheet on the Administration's record on non-proliferation of weapons of mass destruction. This states, among other things, that the

United States “has led international efforts to secure universal adherence to and compliance with” the Chemical Weapons Convention; that the United States “has been at the forefront of international efforts to conclude a legally binding protocol to strengthen compliance with the 1972 treaty outlawing biological weapons”; and that the United States “successfully promoted the membership of Argentina, Hungary, the Czech Republic, Iceland, Slovakia, Romania, Poland and South Korea in the Australia Group, which controls chemical and biological weapon-related material”.

**13 July** In Washington, the President’s Special Oversight Board for Department of Defense Investigations of Gulf War Chemical and Biological Incidents [see 19–20 Nov 98] conducts its fourth public hearing. Several veterans appear before the panel and there is also testimony from the Defense Department and Central Intelligence Agency, as well as from the Armed Forces Radiological Research Institute on aspects of depleted uranium. There is also testimony from the US General Accounting Office, which had studied the operations of OSAGWI during 1997–98.

The Defense Department has now spent about \$115 million in 121 research projects over the past 8 years trying to discover what is behind the Gulf War illnesses. It is now preparing to scale back its activities. Bernard Rostker, the Special Assistant for Gulf War Illnesses to the Deputy Defense Secretary, tells the Board: “We anticipate the need for a smaller, more generic investigative group of government personnel and supplemented by contractors to provide the expertise required to enable us to respond to inquiries from individual veterans and the media”. To reporters subsequently, he says: “We’ve turned over all the biggest stones. Now we need help in determining when the stones get too small to turn over.” The chairman of the Board, former US Senator Warren Rudman, says that even if major aspects of the investigation have concluded without finding a cause, case studies and investigation of war data bases could still be conducted, and the issue is far from closed. On the particular matter of dangers from depleted uranium, he proposes an investigation by the National Institutes of Health.

The CIA says that it has now greatly reduced its estimate of the number of US troops likely to have been exposed to low levels of nerve gas during the Khamisiyah Pit demolition [see 23 Sep 98]. In part this was because “last year UNSCOM performed a very thorough search and excavation of a one kilometre area around the pit, locating only one quarter of the nearly 500 rockets we had estimated were damaged there”; also, “we previously estimated agent in the rockets was 100 percent pure, whereas we now know it was about 50 percent pure at the time of the destruction”.

**13 July** In California, Abgenix Inc announces that it will be collaborating with the US Army Medical Research Institute of Infectious Diseases on the development of antibody therapy against filoviruses, such as Ebola and Marburg. Under the contract, USAMRIID will use the company’s XenoMouse technology to make human antibodies against the viruses.

**13–14 July** In Washington, a seminar-wargame, *Hot Zone ’99*, seeks to identify and rank areas where US capability to counter bioterrorism could be significantly increased. It is convened jointly by the National Defense University Center for Counterproliferation Research and the Potomac Institute for Policy Studies. It brings together local, state and federal officials, terrorism experts, technology users and technology developers. In a preliminary report on the seminar, the Potomac Institute includes a “list of prioritized needs for real

world operators to manage the consequences of a deliberate pathogen release”. It also observes: “Participants in the wargame were also deeply concerned about a public information and education deficiency in the face of a deliberate biological release. The psychological impact of such a crisis might outweigh even the strictly medical impact, as ‘worried well’ individuals overwhelm local medical capabilities. All of these concerns, and the needs listed above, were discussed in detail against the backdrop of a biological attack scenario that affected thousands of people.”

**14 July** Iraq, in the continuing war being waged against it by UK and US air forces enforcing the northern and southern no-fly zones [see 11 Feb], today experiences strikes on 13 military targets, reportedly the largest onslaught in any one day since Operation Desert Fox seven months previously.

**14 July** In Geneva, during the fifteenth session of the BWC Ad Hoc Group [see 28 Jun–23 Jul], a further 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: both by an editor of the series, Graham Pearson of the University of Bradford — namely, *BTWC Security Implications of Human, Animal and Plant Epidemiology and Article VII Measures: Optimizing the Benefits*. Also presented are the first two ‘evaluation papers’ in a new Bradford series, *The BTWC Protocol*, that is to “evaluate the individual Articles and Annexes of the Protocol as they reach the stage at which they are largely agreed”. The first in this series is again by Graham Pearson, *The BTWC Protocol: An Overall Evaluation*, while for the second, *Article X: National Implementation Measures*, he is joined as author by Nicholas Sims of the London School of Economics and Political Science. The briefing, given by Pearson and Sims, is attended by 66 people from 32 delegations.

**14 July** In Washington, the Commission to Assess the Organization of the Federal Government to Combat the Proliferation of Weapons of Mass Destruction [see 29 Apr] releases its report after much prior publicity. The Commission is a bipartisan body chaired by former CIA director John Deutch established by the US Congress some 18 months previously. The Executive Summary of the 269-page report opens thus: “Every American should understand that weapons of mass destruction (WMD) — nuclear, biological, and chemical weapons and their means of delivery — pose a grave threat to the United States and to our military forces and our vital interests abroad. The most serious threats are:

- Terrorist use of weapons of mass destruction against the United States or its allies;
- Possession of, and the manufacturing infrastructure for, WMD by Iran, Iraq, North Korea, or other unfriendly states;
- Diversion of WMD-related weapons, technology, materials, and expertise from Russia;
- Transfer of nuclear, chemical, and biological weapons, delivery means, and technology by China; and
- Destabilizing consequences of WMD programs in the Middle East, South Asia, and East Asia.

These threats define a chilling new reality for our country. Their magnitude and reality require a new strategy focused not just on prevention, but also on combating all aspects of proliferation, to include impeding the spread of capability, responding to proliferation as it occurs, strengthening our capacity to defend against such weapons, and preparing to respond if these weapons are used against us at home or abroad. [...] The Commis-

sion finds that the US Government is not effectively organized to combat proliferation.” It recommends, among numerous proposals, that a new post of National Director for Combating Proliferation be established within the National Security Council structure to coordinate non-proliferation policy among the numerous (reportedly 96) competing cognizant agencies. It also recommends that the Congress should develop a means to review the President’s proliferation-related budget as a whole, rather than dividing the task among several authorization committees and appropriations subcommittees.

President Clinton issues a statement later in the day saying that his National Security adviser Sandy Berger would “coordinate an interagency review and assessment of the Commission’s recommendations and report back to me within 60 days with advice on specific steps”.

**15 July** In Iraq, the technical team dispatched by the UN Secretary-General arrives to close down the UNSCOM chemical/biological laboratory in the Baghdad Monitoring and Verification Centre that is co-located with other UN offices in the Canal Hotel [see 1 Jun]. The OPCW members of team [see 25 Jun] enter the chemical laboratory on 18 July and complete the closure operations, which include the destruction of 250 ml of mustard gas and the various CW agent reference standards, nine days later. The team had met in Baghdad with the UN Secretary-General’s special envoy in Iraq, Ambassador Prakash Shah, and also with diplomatic observers from the Chinese, French and Russian embassies there.

Iraqi officials later choose to criticise the team for destroying the VX reference standards, portraying the destruction as a UN act of cover-up. Thus, according to the new Permanent Representative of Iraq to the UN, Ambassador Saeed Hasan, the VX had been used to contaminate fragments of Iraqi missile warheads in order to suggest what his government had repeatedly denied — that it had actually weaponized VX. Iraqi Deputy Prime Minister Tariq Aziz had voiced this notion during an interview broadcast on Radio Monte Carlo on 30 July. The allegation had been made two days previously in a statement to the Iraqi News Agency by the National Monitoring Directorate. In the UN Security Council, China, France and Russia had reportedly been lending credence to earlier expressions of the allegation.

**15 July** The Russian Navy has been operating a chemical-weapons production and storage facility near Murmansk on the Kola peninsula since about 1984, according to the Oslo newspaper *Verdens Gang*, which is now publishing the findings of a two-year investigation, including photographs of the facility. These show rows of missiles and hundreds of barrels stored near buildings. In the Reuter wire-service report of the Norwegian story, unidentified “international experts” who had studied the pictures are quoted as saying “without doubt” that chemicals were being produced at the facility, but no further explanation is given as to why chemical weapons are reported, apart from a reference to the Norwegian environmental group Bellona having heard rumours of chemical weapons on Kola. The newspaper, which has in fact described the establishment only as a storage facility not as a production facility as well, writes: “An explosion at this plant could lead to an environmental catastrophe in the Nordic region. There would be damage up to 250 km away.”

The story is speedily and vigorously denied by Russian authorities. Among them is the chief of the Russian Defence Ministry RKhB Protection Troops, Col Gen Stanislav Petrov, who also observes that the way is open for Norway to request an inspection of the facility by the OPCW, adding: “However, this costs money and results in political costs if the complaints

prove false. This is why some find it easier to make unfounded accusations through the mass media.” Russian Foreign Ministry spokesman Vladimir Rakhmanin tells reporters that Russia is in full compliance with the CWC; it had declared its chemical-weapons stocks as 40,000 agent-tonnes held at seven arsenals — in the Udmurt Republic, and in Saratov, Kirov, Bryansk, Penza and Kurgan Regions — and neither the OPCW nor any individual member-state had yet called this declaration into question. The Russian Navy’s press service says: “No chemical weapons are stored at any storage facilities or bases of the Russian Navy”, and a spokesman for Bellona repudiates any suggestion that his organization possessed evidence to the contrary. The true purpose of the Kola establishment thus remains unclear.

**15 July** The US Central Intelligence Agency transmits to Congress its latest six-monthly statutory *Report to Congress on the Acquisition [by foreign countries] of Technology Relating to WMD and Advanced Conventional Munitions* [see 9 Feb]. This covers the second half of 1998 and draws attention to exports of key nuclear, CBW and missile technology from Russia, China and North Korea. It also states that Iran has obtained “foreign equipment and material that could be used to create a more advanced and self-sufficient chemical warfare infrastructure”. Further, Iran has also continued to buy “dual-use biotechnical equipment from Russia and other countries, ostensibly for civilian uses”; and the CIA states its belief that Iran may have some “limited” capability actually to use biological weapons. Syria is said to have “a stockpile of the nerve agent sarin and is trying to develop more toxic and persistent nerve agents”.

**15–16 July** In Brussels, at NATO headquarters, a workshop on *Chemical and Biological Defence and Consequence Management* is co-sponsored by the Senior Defence Group on Proliferation and the Senior Civil Emergency Planning Committee. All but Iceland of the 19 NATO member-states participate.

**16 July** On Guam, a stock of mustard-gas artillery shell dating back to the second world war is discovered. Plans are made to remove them to Johnston Atoll for incineration in the JACADS chemdemil facility there.

**16 July** In the US House of Representatives a bill, HR 2543, is introduced by Congressman Walter B Jones (R-NC) that would make the forces-wide Anthrax Vaccine Immunization Program (AVIP) voluntary rather than obligatory to service personnel [see 23 Jun] until the Food and Drug Administration had approved either a new vaccine or a reduced course of shots of the existing vaccine. The following week, Congressman Benjamin Gilman (R-NY) introduces a bill, HR 2548, that would halt implementation of AVIP altogether until an independent study of the safety and effectiveness of the vaccine had been undertaken by the National Institutes of Health, and until a study of the effect of the programme on service morale had been undertaken by the General Accounting Office.

**16 July** The Monterey Institute of International Studies reports that US government spending for antiterrorist purposes has continued to increase rapidly and will next year approach \$10 billion, of which some \$7.4 billion is to be spent by the Defense Department. The study, *US Government Spending to Combat Terrorism* by John Parachini, has drawn principally from reports to Congress by the Office of Management and Budget, as well as from the General Accounting Office [see 16

Mar]. It observes that much of the budgeting described by OMB is "purposely vague presumably because of a desire to mask the amounts of funding for the Department of Defense and the various intelligence agencies throughout the government". The MIIS report says that the biggest focus is on preventing and defending against attacks, work which is done, sometimes under stringent secrecy, by at least 15 major agencies and dozens of smaller programmes, centres, divisions and directorates.

**17 July** The Russian Federation chief medical officer, Gennadiy Onishchenko, says on Ekho Moskvyy radio that the epidemic now manifest in Rostov oblast is probably Congo-Crimean haemorrhagic fever, which is a viral disease, one of "a dozen and a half" different types of haemorrhagic fever known in Russia. Six people have died and more than 80 are in hospital. There is press speculation that possible causes of the epidemic include an act of terrorism. Lev Fedorov [see 9-10 Nov 98], president of the Chemical Safety movement, also suggests there may have been a leak from a biological-weapons store. Dr Onishchenko dismisses these stories as nonsense.

**18 July** The Indian Army again [see 12 Jun] says it has documentary evidence that Pakistani forces in the Kaksar area of the Kargil sector in Jammu and Kashmir possess chemical weapons.

**18 July** The United States has now destroyed 4705 agent-tons of chemical weapons out of the 31,496 agent-tons it possessed worldwide at the start of its Chemical Stockpile Disposal Program, according to a later release by the Army's Program Manager for Chemical Demilitarization. The chemdemil facility on Johnston Atoll, JACADS, has destroyed 1679 agent-tons (including all the sarin and mustard gas once held there, among it the 109 mustard-filled 155-mm projectiles recovered from the Solomon Islands [see 27 May 91]) and has 352 agent-tons of VX stores remaining, which should be gone by the end of next year. The chemdemil facility at Tooele, Utah, TOCDF, has destroyed 22.2 percent of its 13,616 agent-tons of chemical munitions.

**20 July** In Yugoslavia, the Balkans Task Force jointly established by the UN Environment Programme and the UN Centre for Human Settlements under the chairmanship of Pekka Haavisto of Finland commences the field work for the study that is to provide a "neutral and scientifically credible report" on the environmental impact of the 11-week NATO bombing campaign during the Kosovo war. The UN team has two mobile laboratories. It will be spending ten days at the most badly damaged sites, including Pancevo [see 17 Apr], Novi Sad and Baric.

**20 July** In the UK Public Record Office, further state papers from the second world war detailing work on biological weapons are released into the public domain. They include papers on X Base, which had been established in Gruinard Bay, northwest Scotland, on the orders of the Prime Minister to conduct research into the use of anthrax as a weapon. Beginning in 1941, there had been field-tests on the island of 30-pound and then 4-pound bombs charged with anthrax spores; further field tests took place on the Welsh coast at Penclawdd, including the dropping of an anthrax bomb from a Blenheim aircraft in 1942. Other documents include a briefing paper by the head of X Base, Dr Paul Fildes, suggesting the contamination of foodstuffs destined for occupied Europe, notably a proposal for joint action with Norwegian resistance to

infect the fish supplies that were being taken in great quantity from Norway to Germany.

**20 July** US Energy Secretary Bill Richardson addresses a meeting of the Chemical and Biological Nonproliferation Program inaugurated in his department three years previously. The meeting is also attended by representatives of most other departments and agencies concerned with CBW proliferation and terrorism, as well as Congressional staff. He says that the objectives of the Department of Energy in the programme are "to prevent the spread of weapons of mass destruction, to reverse where damage has occurred, and prepare for emergencies if these weapons are ever used". To this end, the budget requested for the programme during FY 2000 had been increased 70 percent over its previous level, to \$32 million: "As we prepare our budget request for FY 2001, let me assure you that we remain committed to aggressively moving forward to counter the chem-bio threat." He describes features of the programme: "Earlier this year, I challenged our labs to develop, within three years, chemical and biological agent detectors small enough to fit into the hand of a fireman or cop. These devices would tell within minutes if a chem-bio agent were present, and what kind of agent, like anthrax or plague. ... I've also challenged our labs' best and brightest to develop, demonstrate and deliver the first phase of an integrated biological detection system — a network of sensors and analytical software that will help us defend our critical national assets, like subway systems, and to shield major events like a Super Bowl or the Olympics."

**20–22 July** In New Mexico, at the Defense Nuclear Weapons School at Kirtland Air Force Base, the US Defense Threat Reduction Agency sponsors the second *Weapons of Mass Destruction Response* symposium. This is intended mainly for commanders of military bases or posts that are first-responders to WMD incidents. Some 200 people participate.

**21 July** UK Defence Secretary George Robertson, at a press conference in London, launches his ministry's long-impending statement following its review of CBW policy and programmes [see 26 Jan], *Defending against the Threat from Biological and Chemical Weapons*. He announces that Britain will be spending some £270 million — £65 million more than in previous plans — over the next three years to meet the challenge of CBW. To the House of Commons he describes what this will involve as follows: "We are enhancing our capabilities with a range of equipment programmes, for example by bringing into service additional Prototype Biological Detection Systems. We are also establishing the Joint Nuclear, Biological and Chemical (NBC) Regiment, and an NBC Defence Headquarters. As a result of our review, I have also set up a new Central Staffs Directorate in the Ministry of Defence to coordinate and take forward further work on NBC defence issues. They will maintain a rolling plan of action and report progress to me on a regular basis."

The statement itself, presented as a 33-page illustrated brochure, "provides for the first time", so the Ministry of Defence says in a covering letter, "a clear and comprehensive account of the government's policy on biological and chemical defence". The policy is derived from a central outcome of the 1998 Strategic Defence Review: that strategy should move from the old Cold War concept of stability based on fear to stability based on the active management of risk. On managing the risks posed by CBW, the statement says: "The UK's key policy aim, consistent with that of NATO, is to maintain our political and military freedom of action despite the presence, threat, or use of biological or chemical weapons. Our policy rests on four

inter-related pillars: arms control, preventing supply, deterring use and defending against use.” Further: “The foundation for managing the risks is diplomatic: international pressure to agree acceptable norms of behaviour; disarmament and non-proliferation initiatives; and preventing the supply of materials needed for biological and chemical weapons programmes.”

The statement addresses terrorism as follows: “So far, very few terrorist groups have shown an interest in biological or chemical materials. The 1995 sarin attack by Aum Shinrikyo on the Tokyo underground has been the most serious incident to date. Most groups will continue to prefer conventional means of attack. The current threat to UK interests — including the UK itself, foreign interests based here, or our interests overseas — is low. Our most effective defences against the terrorist threat will remain: good intelligence, efficient procedures to control the entry of people and materials into the UK, and the means to respond effectively to incidents.”

**21 July** In the US House of Representatives, oversight hearings on the Defense Department’s force-wide Anthrax Vaccine Immunization Program (AVIP) [see 16 Jul] 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 willingness and ability of the Defense Department to acknowledge, diagnose and treat adverse reactions to the vaccine. There is testimony from active-duty and reserve-component service personnel affected by the vaccine, from the General Accounting Office, from the Defense Department, and from the Food and Drug Administration. It emerges from the GAO testimony that the Defense Department’s Vaccine Adverse Event Reporting System (VAERS) is probably recording only about one percent of AVIP adverse reactions [see also 25–27 May].

**21 July** The US Commerce Department Bureau of Export Administration publishes proposed regulations outlining requirements for US industry compliance with the Chemical Weapons Convention [see 25 Jun]. Additional CWC-implementing regulations are published by the State Department. They concern the taking of samples by OPCW inspectors and the enforcement of requirements concerning record-keeping and inspections. 30-Day public comment periods now begin.

**21 July** In California, a US District Court passes sentence on Harvey Spelkin, the accountant found guilty of phoning an anthrax threat to a bankruptcy court before which he was scheduled to appear [see 27 Apr]. His lawyers had argued that the law under which he had been charged, the Biological Weapons Anti-Terrorist Act of 1989 — the US BWC-implementing legislation — was not applicable to hoax cases, but the court has disagreed. Spelkin is ordered to pay more than \$600,000 restitution for the costs his hoax had caused to police and fire departments, and he is also sentenced to a day in jail and five years of supervised release.

**22 July** In Russia, Vyatka-Eko company of Kirov is reported to have developed a new chemdemil technology for assembled chemical weapons that does not involve opening the munition casings. Testing is due take place at a Ministry of Defence facility in the Saratov region.

**22 July** In The Hague, the OPCW Executive Council convenes for its seventh and eighth formal meetings [see 23 Jun].

**22 July** In Arkansas, the destruction of the old BZ production facility at Pine Bluff Arsenal is completed.

**22 July** Libyan programmes in CBW and other weapons of mass destruction are the subject of testimony in the US House of Representatives given by Dr Joshua Sinai before the International Relations Subcommittee on Africa. Dr Sinai is a consultant to Analytical Services, which he describes as a not-for-profit national security research institute in Arlington, Virginia. One thrust of his testimony is that, “while Libya is threatening to become a proliferator of CBW, it also is emerging as a facilitator for other rogue states’ CBW programs”, in particular those of Iraq and Sudan.

**23 July** In Sudan, government aircraft drop chemical bombs on two towns in the south, Lainya and Kaaya near the Uganda border, held by the Sudan People’s Liberation Army, according to an SPLA spokesman in Nairobi, Samson Kwanje, speaking to reporters one week later. He is quoted as follows: “It is reported that a day after the bombing of these towns, children and men and women started to vomit blood”. Since the bombing, “almost all pregnant women have aborted or are gravely ill”; goats, sheep, cats, dogs and birds are dying in large numbers. The bombs had left “greenish coloration and a foul smell” but no craters typical of normal bombs. Also speaking to reporters that same day in Nairobi is Dr Temesgen Demeke of Norwegian Peoples Aid, a private agency. He confirms the absence of large craters and the greenish colour. He also says that an NPA surgeon had been dispatched to the area to investigate, but had yet to report back. General Mohamed Osman Yassin, speaking for the Sudanese Army, dismisses the rebel allegation as “mere lies and fabrications”. Shortly afterwards, however, a spokesperson for the UN World Food Program tells reporters in Nairobi that three WFP workers had stopped briefly in Lainya three days after the bombing. They had approached a foul-smelling shallow crater and immediately “suffered from a burning sensation in their nose and eyes, started sneezing and coughing”; later in the day they began violent vomiting. They were evacuated to Kampala and are still suffering from “flu-like symptoms”. The spokesperson says that the United Nations is now conducting an investigation that extends to the local population. A member of the Sudanese mission to the UN, Tarik Bakhi, says to reporters: “We categorically deny these allegations”, adding that Sudan had recently become a party to the Chemical Weapons Convention [see 24 May] and continuing: “We don’t have anything to hide. I don’t think Sudan will mind an investigation.” Later, Sudanese Foreign Minister Mostafa Ismail Othman also rejects the allegations, saying that Sudan possessed no chemical weapons on any part of its soil, but states that Sudan is ready to receive any impartial and credible party to investigate the matter. Subsequently he states that some organizations, in collaboration with the rebel movement, are attempting to destabilize Sudan and to arouse international and regional public opinion by circulating false allegations. He names three organizations in this connection: the NPA, Christian Solidarity International, and the Cairo-based Sudan Human Rights Organization.

On 5 August a team of medical doctors under UN auspices arrives in Lainya and Kaaya. From Nairobi, UN spokesperson Sharad Sapra tells reporters that the team is providing humanitarian assistance, not seeking to establish whether weapons of mass destruction have been used.

**23 July** In Russia, the Ministry of Health describes to reporters the targeted federal programme that has just been adopted by the government aimed at creating methods and



means of protecting the population and the environment from pathogenic organisms that cause disease in human beings and in animals. The programme envisages restoring and developing the scientific, material and technical potential of biotechnology research organizations. Funding at R1.37 billion is to be provided for the period 1999–2005.

**25 July** In Tel Aviv, unidentified “Israeli sources” have said that Syria is preparing an initiative for the impending resumption of peace talks with Israel in which it would promise to dismantle its CBW weapons in return for Israeli renunciation of nuclear weapons, so it is reported in the London *Sunday Times*.

**25 July** The UK Ministry of Defence has encountered US Defense Department opposition to its plans for the partial privatization of its Defence Research and Evaluation Agency [see 5 May], so London newspapers reports. DERA assets include CBD Porton Down. Quoting DERA sources, *Sunday Business* states that “the American government objected to the sell-off because the agency co-operates extensively with the US ... sharing high-level intelligence and research data. Officials in Washington fear a partial privatisation would be a security risk, as well as giving the new private firm an unfair advantage over US defence companies.” A decision on the status of DERA, previously expected this month, has now been delayed until the autumn.

**26 July** US Defense Secretary William Cohen publishes in the *Washington Post* an op-ed piece warning against CBW terrorism at home: “The United States now faces something of a superpower paradox. Our supremacy in the conventional arena is prompting adversaries to seek unconventional, asymmetric means to strike our Achilles’ heel. At least 25

countries, including Iraq and North Korea, now have — or are in the process of acquiring — weapons of mass destruction. Of particular concern is the possible persistence in some foreign military arsenals of smallpox, the horrific infectious virus that decimated entire nations down the ages and against which the global population is currently defenseless. Also looming is the chance that these terror weapons will find their way into the hands of individuals and independent groups — fanatical terrorists and religious zealots beyond our borders, brooding loners and self-proclaimed apocalyptic prophets at home. This is not hyperbole. It is reality. ... The race is on between our preparations and those of our adversaries. We are preparing for the possibility of a chemical or biological attack on American soil because we must. There is not a moment to lose.”

**27 July** In the United Kingdom, Parliament is told that both the National Health Service and the Department of Health have “begun to enhance the capacity of the health service to deal with a possible threat from chemical or biological weapons”, as announced in the government’s new CBW defence strategy document [see 21 Jul]. These measures “include the further strengthening of protection for ambulance service and hospital staff, and the improvement of decontamination facilities”.

**27 July** The US Defense Department announces that it will direct the Army to study all six of the non-incinerative chemdemil technologies [see 7 May] that had previously been shortlisted for possible development. Army work has thus far been directed at only three of the six contenders, managers citing insufficient funding. Released next day is a report by the Comptroller of the Defense Department stating that \$845.6 million of the \$3.2 billion appropriated to the chemdemil programme during 1993-99 remained unexpended. This was due to factors out of the control of the programme managers.

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## Forthcoming events

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The sixteenth session of the BWC Ad Hoc Group will be held in Geneva during 13 September–8 October, and the next during 22 November–10 December.

The sixteenth session of the OPCW Executive Council will be held in The Hague on 21–24 September, with the seventeenth during 30 November–3 December.

The sixth Biological Medical Defence conference of the German Federal Ministry of Defence will be held at the German Armed Forces Medical Academy on 27–28 October. Enquiries about participation to Lt-Col Dr E-J Finke, fax: \*\* 49-89 3168 3292, e-mail: SanAkBw-IMB@T-Online.de

The First African Seminar on Analytical Issues Related to the CWC will take place in Pretoria, South Africa during 16–18 November organized jointly by Protechnik

Laboratories and the OPCW. Enquiries about participation to Dr PC Coleman, e-mail: protechnik@armscor.co.za, fax: \*\* 27-12 665 0240.

A Wilton Park conference *Forging an International Consensus to Ensure Compliance with Non-Proliferation Regimes* will take place at Wiston House, England during 13–17 December. Enquiries about participation to Heather Ingrey, fax: \*\* 44-1903 814217, e-mail: heather.ingrey@wiltonpark.org.uk

The International Centre for Genetic Engineering and Biotechnology (ICGEB), jointly with the United Nations 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 2000. Enquiries about participation to

Elisabetta Lippolis, fax \*\*39-40 226555, e-mail: lippolis@icgeb.trieste.it

The fifth international *Chemical and Biological Medical Treatment Symposium* (CBMTS III) will take place in Spiez, Switzerland during 7–12 May 2000. Enquiries to Rudolf Portmann, e-mail: rudolf.portmann@x400.gr.admin.ch, fax \*\*41-33 22 8 1402.

The Fifth Session of the OPCW Conference of the States Parties will take place in The Hague during 15–19 May 2000.

NBC2000, A Symposium on Nuclear, Biological and Chemical Threats in the 21st Century will take place during 13–15 June 2000 at the Helsinki University of Technology. Enquiries about participation to Dr Katri Laihia, e-mail: laihia@cc.jyu.fi, fax: \*\*358-14 602 501.

**28 July** In Tokyo, Japan Defense Agency minister Hosei Norota and visiting US Defense Secretary William Cohen say that their two countries will sign a memorandum of understanding on joint development of means to detect and destroy enemy missiles before they strike Japan.

The Tokyo newspaper *Mainichi Shimbun* later reports that the Defense Agency has recently estimated, on the basis of US data, that a North Korean missile carrying a biological warhead could kill or injure up to 120,000 people in a strike on Tokyo. The corresponding figure for a nuclear warhead was about 80,000 people; for a chemical warhead, 1000–2000 people; for a conventional warhead, less than 100 people. The newspaper also states that, according to US military information, North Korea possesses anthrax germ weapons.

**28 July** In Grozny, a conspiracy by the Russian Federal Security Service that included plans to use chemical weapons in Chechnya for purposes of terrorism is denounced to journalists by Chechen Division General Shamil Basayev.

**28 July** In the United States, the American College of Emergency Physicians devotes much of the August issue of its journal, *Annals of Emergency Medicine*, to articles describing what is being done in the country to prepare for nuclear or CBW attack.

**30 July** In Beijing, China and Japan after six years of bilateral talks sign a Memorandum of Understanding on the clearing-up of chemical weapons abandoned in China by the Imperial Japanese Army [see 3 Jun]. As published by the Japanese side, the main points of the Memorandum are as follows: "(1) the Government of Japan and the Government of the People's Republic of China, through successive joint on-site investigations, have confirmed that huge amount of ACW which were owned by the former Japanese Army exist in the People's Republic of China. (2) the Government of Japan, in accordance with the CWC, will sincerely fulfil the obligation of

Abandoning State Party for the destruction of ACWs which are already confirmed as having belonged to the former Japanese Army as well as those which will be confirmed in future. (3) the Government of Japan, in accordance with the provisions of the CWC, will provide all necessary financial, technical, expert, facility as well as other resources for the purpose of destroying the ACWs. The Government of the People's Republic of China will provide appropriate cooperation for the destruction. (4) The Government of Japan, in conducting the above-mentioned destruction operation, confirms that it will abide by the laws of the People's Republic of China and that utmost priority will be given to preventing the ecological environment of the People's Republic of China from being contaminated and to securing the safety of the personnel at work. Upon this, the Government of the People's Republic of China will consent to the destruction operations to be carried out inside its territory. (5) The issues including the location of the destruction facilities and their construction will be settled through consultation between the two governments. The two governments will adopt in principle the Chinese standards with regard to the environmental standards to be kept during the destruction operation, and have decided to conduct environmental-impact assessment and monitoring. (6) The two governments will discuss and decide on the objectives, rules and time-limit of the destruction based on the CWC. (7) The two governments will select mature destruction technology which is fully reliable in terms of destruction efficiency, safety and environment. Concrete types of destruction technology will be finally decided upon after being discussed and thoroughly examined by the experts on both sides at the Japan–China Joint Working Group meeting, by methods of assured transparency and impartiality. (8) The two governments will hold consultations immediately if by any chance an accident occurs during the destruction operation. Based on these consultations, the Japanese side will take satisfactory measures for both sides in order to provide necessary compensation, and the Chinese side will provide appropriate cooperation for such Japanese measures."

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#### Editors

Matthew Meselson  
Department of Molecular and Cellular Biology  
Harvard University  
7 Divinity Avenue  
Cambridge, Massachusetts, 02138  
United States of America  
[Tel: 617-495-2264. Fax: 617-496-2444]

Julian Perry Robinson  
SPRU — Science & Technology Policy Research  
University of Sussex  
Brighton, BN1 9RF  
England  
[Tel: 01273-678172. Fax: 01273-685865]

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