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IMPLEMENTING THE CHEMICAL WEAPONS CONVENTION: TECHNICAL AND POLITICAL CHALLENGES IN THE US AND RUSSIA

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After years of tedious and contentious negotiations, most everyone breathed a deep sigh of relief when the Chemical Weapons Convention (CWC) was signed by 130 countries in January 1993. The immediate challenge thereafter was to achieve ratification by the required 65 nations for entry into force and by the two major chemical weapon powers – Russia and the United States. Over four years later, on 29 April 1997 the CWC entered into force with the United States just making it under the wire with its ratification four days earlier. Russia ratified on 5 November 1997.

For some observers, this was the long-awaited culmination of many decades of effort to abolish a whole class of mass destruction weapons. For others, however, it was only the beginning of a difficult road ahead to implement the CWC. Questions of technology choice, environmental permitting, public health impacts, financing, and community involvement remained to be tackled in both the US and Russia. And with the CWC's official entry into force, a ten-year clock began ticking for abolition of chemical weapon stockpiles by April 2007 (with the possible option of a five-year extension to 2012 upon request and approval by the CWC Conference of the States Parties). Thus the inevitable clash of legally binding deadlines, of development of appropriate destruction technologies, and of democratic decision-making and consensus-building began in earnest.

Two recent Global Green/Green Cross forums in Moscow and Washington illustrate the high hurdles still remaining. On 26 May Global Green USA organized a Legacy Program briefing on Capitol Hill with Dr. Theodore M. Procv and Brig. Gen. Thomas E. Kuenning Jr. (USAF, retired), each speaking respectively on the American and Russian chemical demilitarization programs. Entitled *Abolition of Chemical Weapons: An Update on Russian and American Demilitarization on the Second Anniversary of the Chemical Weapons Convention*, the forum sought to review how much both countries had accomplished and how much remained one-fifth of the way down the CWC ten-year path.

Procv, the Deputy Assistant Secretary of the Army for Chemical Demilitarization, emphasized that some 22 per cent of the US stockpile – 6,865 tons – would be destroyed

by the end of 1999 and that 90 per cent of the initial 31,495 tons in the stockpile is now under contract for destruction. Only two of the nine major American stockpile sites remain without a contract or technology for stockpile destruction. The total estimated cost for stockpile destruction has grown to \$12.4 billion, for non-stockpile chemical materiel to \$1.4 billion, and for emergency preparedness to \$1.2 billion; the grand total of \$15 billion far exceeds early estimates of \$2 billion or less and, as Procv pointed out, will be subject to “out-year cost growth” if schedules continue to slip, additional technology development is necessary, or more buried chemical weapon materiel is identified.

The “baseline” incinerator technology has been chosen for five of the nine US sites – Johnston Atoll (operating since 1990); Tooele, Utah (operating since 1996); Anniston, Alabama (construction started in 1997); Umatilla, Oregon (construction started in 1997); and Pine Bluff, Arkansas (construction started in 1999). Neutralization followed by bioremediation has been selected for the mustard agent in bulk containers at Aberdeen, Maryland (design/build contract awarded in 1998); neutralization followed by supercritical water oxidation has been selected for the bulk VX nerve agent at Newport, Indiana (design/build contract awarded in 1999). Only Pueblo, Colorado and Blue Grass, Kentucky are still in search of appropriate technologies through the congressionally mandated program (Public Law 104-208) on Assembled Chemical Weapons Assessment (ACWA) which will present findings to Congress in September on three recent technology demon-

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strations. Combined with a National Research Council independent assessment, and a schedule and cost audit by Arthur Andersen consultants, the forthcoming ACWA report should allow a technology selection for Colorado and Kentucky within the coming year.

Regarding the “non-stockpile” chemical sites, Prociv underlined that suspect material is located in 38 states at several hundred sites with a wide variety of activity currently ongoing including destruction of the VX production facility at Newport, the BZ munitions fill facility at Pine Bluff, and buried chemical weapons cleanup in the Spring Valley section of Washington, DC. The good news about binary weapons is that all 201,728 excess M-687 projectile bodies were destroyed at Hawthorne Army Depot, Nevada by 6 January this year; all excess canisters were destroyed by 16 March, thus meeting an interim CWC deadline. Still awaiting destruction are 17,220 M-687 binary projectiles and canisters scheduled for elimination by August plus the 56,820 complete sets of projectiles and precursor-filled canisters that are to be eliminated in the second and final phase of the binary-munitions destruction campaign. Also, a small transportable destruction device for detonating chemical munitions has been tested and will be shipped to Britain in June for further testing.

Former production facilities for chemical weapons at three sites – Aberdeen, Newport and Pine Bluff – also await destruction; the Newport VX plant is now ahead of schedule with some ten per cent of specialized equipment destroyed.

Prociv concluded that he was committed to controlling “cost growth and schedule creep” which have plagued the American chemical weapons demilitarization for over a decade but, when asked about the viability of meeting the 2007 CWC deadline, he cited a 1998 audit by Arthur Andersen consultants estimating “a five percent probability” of meeting this initial CWC target date and projecting another \$3 billion in program cost growth.

Also raised by Prociv was the ongoing need for citizen and community involvement. He cited this as a key and successful component of the national Dialogue on Assembled Chemical Weapons Assessment, where states, regulatory agencies, tribal representatives, citizens, and national environmental groups (including Global Green USA) have reviewed plans over the past two years for innovative, non-incineration technologies. The Dialogue process, recently selected by Harvard University as a finalist in its annual innovative technology award competition, was established as part of the ACWA process to help build consensus around destruction processes. Global Green USA has played an active role in this process since its inception in 1997 and was selected to join the CATT – a four-person Citizens’ Advisory Technical Team which joins the sensitive procurement process as the Dialogue’s eyes and ears.

The May GGUSA roundtable also heard from Brig. Gen. Thomas Kuenning Jr. on the Cooperative Threat Reduction (CTR) program and its efforts to destroy chemical weapons at one of seven Russian chemical weapons stockpile sites. The CTR program began in fiscal year 1992 with an initial appropriation of \$12.9 million and has since grown to almost \$500 million annually. As part of Defense Department expenditures, CTR is aimed at destroying

weapons of mass destruction of the former Soviet Union, enhancing safety and security of Russian facilities, encouraging military reductions and reform, and supporting non-proliferation policies.

The large majority of CTR funding to date has been oriented toward nuclear weapons. However, some \$100 million has been targeted at biological weapons by dismantling the BW production facility at Stepnagorsk in Kazakhstan, by collaborative Russian–American research, and by securing laboratory stocks of potential BW agents. The current value of the CTR program for chemical weapons is \$192.2 million, but the projected total is \$1.1 billion. Most of this will be dedicated to constructing a pilot demilitarization facility at Shchuch’ye in the Kurgan Oblast just north of Kazakhstan. Also funded is the construction of a Central Analytical Laboratory (CAL) in Moscow, now scheduled for completion in December 1999, and three mobile labs.

CTR funding will support construction of the first stage of the Shchuch’ye facility — two destruction processing lines for 85–152 mm and 220–240 mm artillery shells filled with nerve agent. This will handle up to 500 metric tons per year. A second stage of construction for two additional lines for 85–152 mm artillery shells and larger 540–880 mm artillery and rocket (FROG and SCUD) warheads is planned to be the responsibility of Russia. This would add another 700 metric tons per year of processing capability.

Two major procedural goals for construction of the Shchuch’ye facility have already been met: the “Justification of Investment” (JOI) in July 1996 and the site selection in June 1998. Still to be addressed is the land allocation, now scheduled for September 1999. General Kuenning pointed out that, assuming that the schedule is no longer delayed, construction of the facility could be finished in 2004 or 2005, with operations beginning in 2006. He admitted to the “impossibility” of Russia therefore meeting the CWC deadline of 2007.

A recent report of the US General Accounting Office (GAO) also pointed out that Shchuch’ye’s 5,600 tons of nerve agent would probably not be fully destroyed until 2017 unless the facility design was expanded. Russia’s 1995 chemical weapons destruction plan projected completion of five nerve agent facilities by 2001 but continual delays and lack of Russian funding now make compliance with CWC time lines an academic exercise.

CWC implementation in Russia has been burdened by a number of roadblocks, perhaps the greatest being the demand by local stockpile communities for infrastructure investment. When I first visited a Russian CW stockpile in 1994, local town leaders explained to me that the arsenal in their backyard had been kept secret until the early 1990s and had thereby prevented any outside involvement, and therefore investment, in their community for decades. They were now adamant that any destruction facility, with its associated risks and burdens, would have to include considerable benefits for the local community so that the region could become sustainable over the longer run. Kurgan Governor Oleg Bogomolev stated in a recent press interview that he would not allow land allocation to take place until visible progress had been made with housing and road construction and other infrastructure development requested by the community.

American politics also plays a role in delaying Russian chemical weapons demilitarization. The CTR program is constrained by past congressional legislation specifying that no funds can be spent "outside the fence", that is, beyond the immediate needs of weapons destruction. Proposed legislation for fiscal year 2000 delineates additional specific prohibitions: peacekeeping activities, housing, environmental restoration, and job retraining. House Armed Services Committee Chairman Floyd Spence, a conservative Republican from South Carolina, has also proposed killing CTR support for Russian chemical weapons demilitarization, arguing that nuclear weapons destruction should take complete priority. (See Section 1305, "Limitation on Use of Funds for Chemical Weapons Destruction", of H.R. 1401 for FY 2000 defense authorizations.)

Still another challenge for Russian CW demilitarization to meet is the optimization of the technology of destruction. Several years ago, through the Russian-American Joint Evaluation Program, Russian scientists developed a two-stage technology for destruction of Russian VX nerve agent. The first stage would be neutralization by ethanalamine solvolysis, followed by bitumenization – the mixing and solidification of the neutralized mixture with asphalt for subsequent landfill. Although US scientists several years ago recommended leaching studies of the potential toxicity and long-term carcinogenic effects of the bitumen mass, Russian labs have continued to scale up the technology. The GAO reports that the initially proposed bitumen waste product had a flash point "about 20 degrees Fahrenheit below the threshold that US fire code standards would classify as 'explosive'", further delaying the Shchuch'ye schedule until the composition could be modified. Preliminary reports now state that the Russian two-stage technology may be progressing successfully, but the community remains wary of an enormous, long-term landfill with little confidence in long-term federal funding for maintenance. Kuenning has promised the public that CTR will not support any technology which does not meet American environmental and public health standards.

Another related problem with Russian CWC implementation is funding. A conference held in Moscow on 18 May, organized jointly by Global Green/Green Cross and the EastWest Institute, sought to bring together individuals and organizations interested in demilitarization and development. Entitled *Chemical Weapons Destruction: Opportunities for Regional Development, Civil Society, and Business*, the conference underlined the need for foreign investment in not only chemical weapons demilitarization, but also socio-economic infrastructure in the stockpile regions. Regional governors and representatives portrayed development needs in stark terms and argued that until such investment was forthcoming from Moscow and/or abroad, chemical weapons would not be destroyed. In other words, chemical weapons stockpiles are being held hostage to long-awaited societal needs in the Russian regions.

Two representatives of the Russian Ministry of Defence, Generals Valeri Kapashin and Vladimir Ulyanov, readily admitted that Russian financial support for CW destruction had fallen far short of requests and projections. They also pointed out, however, that except for the American support of the Shchuch'ye site, there had been very little help from

other countries. The United States has estimated that planning, construction, and initial operation of the Shchuch'ye facility will cost upwards of \$800 million to destroy some 13 per cent of the Russian CW stockpile. What of the remaining 87 per cent – some 35,000 tons of nerve and blister agents?

Several West European countries have initiated much less ambitious efforts to support Russian CW demilitarization. Sweden, for example, signed a 1993 agreement with Russia to undertake risk analysis for the Kambarka CW site, a lewisite bulk agent stockpile in the Udmurt Republic. It has also supported the opening of a public outreach center to link Russian military authorities and local citizens. To date the cost of this effort is estimated by Swedish authorities at 3.6 million Swedish Krona (\$420,000).

As reported by General Kapashin, Germany has committed some DM22 million (\$11.8 million) to date to support the CW site in Gornyy, a stockpile of mustard and lewisite in the Saratov Oblast. Norway has also promised \$190,000 for environmental and health monitoring at Gornyy. The Netherlands signed a December 1998 agreement to work at Kambarka as well for NLG10.8 million (\$5.1 million). Finland is also supporting Kambarka with FM2 million (\$350,000). France is also considering helping out in Gornyy, while Italy promised at a 1998 Green Cross/Global Green hearing some \$8 million for pipeline development in Kizner in the Udmurt Republic. The UK and Canada may also join in support this year. Switzerland has been supporting much of the public outreach work of Green Cross Russia and Green Cross Switzerland for some \$300,000 annually. In addition, as reported by Stefan Schleuninger of the European Commission, also at the Conference, 10 million Euros (\$10.4 million) has been dedicated by the European Union for 1997–99 for environmental protection and monitoring in Gornyy, for safety and health work at Nizhny Novgorod (CW production facility), and for 'micro-projects' this year in civil society and ecological monitoring.

These ten countries, however, have to date committed only a small fraction of the support of the United States and of the overall estimated cost of Russian CW abolition – likely to reach \$10 billion or more for all seven major sites. It is readily apparent that without expanded Western aid Russia will not destroy its 40,000 tons of chemical weapons for decades to come.

The Green Cross/Global Green program to address the need for CWC implementation, CW demilitarization, and CW nonproliferation has sought to address these many and interrelated challenges on several levels in both the US and Russia. The Legacy Program was founded five years ago by Green Cross President Mikhail Gorbachev to help facilitate the cleanup and sustainable redevelopment of military lands after the Cold War. It has operated as a joint American-Russian-Swiss project and has focused to a large extent on the demilitarization of chemical weapons arsenals as one of the most dangerous, challenging, costly, and timely legacies of the Cold War.

"ChemTrust", as the Legacy Program's chemical demilitarization efforts have been called in Russia and the US, has first sought to facilitate federal-state-local dialogue and consensus on CW destruction efforts. Five public hearings

in state capitals and at local CW sites have been organized to date in Russia; one hearing has been convened in the US in Indiana. Three briefings have also been held on Capitol Hill in Washington with federal, state, and local officials, state regulators and governors' representatives, citizens, industry representatives, and arms control and environmental groups. A sixth public hearing is now planned for 1999 in Russia.

Global Green and Green Cross have also initiated a Russian-American partnering program and have partnered the Kurgan Oblast with the State of Indiana; the village of Shchuch'ye has also been partnered with the town of Clinton, Indiana. A second Russian region will be partnered with an American state in 1999.

Under sponsorship of the Cooperative Threat Reduction program, Global Green and Green Cross also organized a workshop in March 1999 on the establishment of citizens' advisory boards in Russia in order to further local and regional consensus-building. A workshop discussion paper was presented which analyzed the American and Swiss experiences with Citizens' Advisory Commissions (CACs) at CW stockpile sites, Restoration Advisory Boards (RABs) at closing military bases, and consensus-building processes in Basel, Switzerland. Hosted by the Russian Ministry of Defense, this workshop has led to a Green Cross CAC model now being considered in Russian regions of demilitarization. An additional and obvious product of this work in Russia has been promotion of civil society, democratization, and the rule of law.

Global Green USA, while taking no stand on specific technologies, has also sought to facilitate the research, development, and demonstration of alternative destruction technologies in order to provide communities with a wider range of technology choice and to provide the military with a more robust and complementary tool box for CW destruc-

tion. This work has been done primarily through active involvement in the national Dialogue on Assembled Chemical Weapons Assessment, mentioned above, and sponsorship of Russian delegations to participate in Dialogue meetings. ACWA completed its initial demonstration phase of three groups of technologies in early May and, as noted earlier, will present its evaluation of the data to Congress in September. These non-incineration technologies include neutralization, bioremediation, supercritical water oxidation, plasma arc, and a number of related systems.

In conclusion, the negotiation of international arms control agreements is only the first step in elimination of weapon systems. The Chemical Weapons Convention — which took some sixteen years to get from the establishment of the Ad Hoc Committee on Chemical Weapons in Geneva to entry into force — may indeed require another sixteen years or more to fully implement. CWC implementation requires a multi-pronged approach: government-sponsored technology development in partnership with industry; proactive involvement of all stakeholders at federal, state, and local levels; transparency of information; dedicated facilitation of consensus-building around technology choice, construction, and public health and environmental impacts; investment in local infrastructure in order to help establish sustainable economies after CW stockpiles and military bases are gone; and sufficient funding from the federal government and, in the case of Russia, from multiple sources to carry the abolition of chemical weapons to its ultimate conclusion.

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THE EUROPEAN UNION'S ROLE IN CBW DISARMAMENT AND NON-PROLIFERATION

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According to Article 11 of the Treaty of Amsterdam (which entered into force on 1 May) the European Union (EU) "shall define and implement a common foreign and security policy covering all areas of foreign and security policy". Throughout the implementation of this common foreign and security policy (CFSP), the EU has paid much attention to the non-proliferation and disarmament of chemical and biological weapons.

The Union¹ played a constructive role during the negotiation and preparatory phase of the 1993 Chemical Weapons Convention (CWC) and is currently playing a similar role in the negotiation of the protocol to strengthen the 1972 Biological Weapons Convention (BWC) and in the implementation of the CWC following its entry into force in April 1997. While, for a number of years the EU has expressed its support for the CBW disarmament and non-proliferation regimes, its activity is not limited to a merely de-

claratory approach. On a more practical level, the EU facilitates the coordination and cooperation of its fifteen member states on CBW issues, particularly in international organizations and negotiations. The EU also provides funding for the demilitarisation of chemical weapons production facilities in Russia and for the re-training of scientists from former CBW programmes in Russia and Ukraine. The member states of the EU operate controls on the export of dual-use goods from their territory.

EU activity with regard to CBW does not fit neatly into one of the three "pillars" which make up the Union. Instead, activity cuts across all three, from the supranational first pillar (the original European Communities structure), to the intergovernmentalism of the second (the CFSP) and third (justice and home affairs) pillars. The changes recently introduced by the Treaty of Amsterdam, in particular the appointment of the high representative for the CFSP, the

creation of a policy planning and early warning unit and the adoption of common strategies, should bring more coherence to the Union's activities in this area.

Political support for non-proliferation regimes

For many years the EU, its institutions and member states have declared their support for non-proliferation and disarmament regimes. Summarising this support a senior Commission official, said that "the EU demonstrates a constant and coherent line on the issue of verification, safeguards, non-proliferation and disarmament, in the field of weapons of mass destruction. The EU is a strong supporter of the Chemical Weapons Convention verification mechanisms. It is also in the forefront of discussions in Geneva on the strengthening of the Biological Weapons Convention".² When discussing priority areas for the new CFSP, the 1992 Maastricht European Council indicated a number of "domains related to security". These included disarmament and arms control and transfers of military technology. In the years since, the EU has become an important player with regard to CBW non-proliferation and disarmament.

At the highest political level, namely the European Council, this support is reflected in communiqués such as those from the summits in Cannes and Madrid in 1995 which called for the prompt entry into force of the CWC and for all EU member states to be original states parties to the treaty. In the 1995 Barcelona Declaration, signed by representatives of EU countries and others in the Mediterranean region, signatories undertook to:

promote regional security by acting, inter alia, in favour of nuclear, chemical and biological non-proliferation through adherence to and compliance with a combination of international and regional non-proliferation regimes, and arms control and disarmament agreements such as NPT, CWC, BWC, CTBT and/or regional arrangements such as weapons free zones including their verification regimes, as well as by fulfilling in good faith their commitments under arms control disarmament and non-proliferation conventions.

On 30 May 1997 the EU issued a declaration welcoming the CWC's entry into force and on 22 December 1998 issued another calling for the prompt conclusion of negotiations on the BWC protocol. Also in 1998, on 18 May, the EU and the USA agreed a declaration on the "common orientation of non-proliferation policy". This emphasised their support for the CWC and BWC and contained measures for strengthening cooperation on non-proliferation issues.

The European Parliament, too, has been active in matters relating to CBW disarmament and non-proliferation. During the 1980s, the Parliament passed a number of resolutions criticising the proposed US deployment of binary chemical weapons in western Europe and calling for the quick conclusion of the negotiations on the CWC. In the late 1980s the Parliament passed resolutions on Iraq's use of chemical weapons in its war with Iran and against its own people which called for the member states to take measures to adopt controls on the export of dual-use chemicals. In 1995 the Parliament passed a resolution stressing the importance of the early entry into force of the CWC and calling on those EU member states which had not yet ratified the treaty to do so urgently.

On a more practical level, the EU's support for the CBW non-proliferation regimes can also be illustrated through its use of demarches. In March 1997 the Union issued demarches to all those states which had not ratified the CWC in order to promote the maximum possible adherence to the treaty before its entry into force. Demarches have also been issued to those states parties which are in "technical non-compliance" with the CWC through failing to submit complete initial declarations. It also appears that the EU played a role in the recent accession to the CWC by Sudan. The Sudanese foreign minister said "the United States asked us to sign this treaty, but we did so only after the formal intervention of European, and in particular of Italian, diplomacy."³ The EU has also carried out demarches in support of BWC universality and in order to encourage support for its common positions within the BWC Ad Hoc Group (AHG). Demarches by the EU are delivered either personally by the so-called "troika" (the current, incoming and outgoing presidencies of the Council) on an official visit or through the embassy of the presidency in the state concerned. The contents of demarches normally remain confidential.

Policy coordination and implementation

EU policy and areas for cooperation on CBW matters are decided in national capitals (particularly the capital of the country holding the six-monthly rotating presidency) and in Brussels. They are then implemented in such forums as the OPCW and the AHG or in bilateral meetings. The Treaty of Amsterdam strengthened the existing cooperation and coordination procedures of the CFSP.

As the seat of the Council of Ministers and of the Commission, Brussels is very much the hub of EU cooperation and coordination on CBW issues, with significant input from national capitals. The General Affairs Council, which meets approximately once a month and is attended by the 15 foreign ministers, sits at the apex of the foreign and security policy-making process. Its meetings are prepared by a committee of the 15 permanent representatives (known by its French acronym as COREPER) and by the Political Committee (otherwise known as CoPo) which is made up of the political directors of the 15 foreign ministries. However, much of the detail of policy is dealt with at a lower level in one of the Council's many working groups. There are a number of CBW-related working groups, including one on UN disarmament, known by its acronym as CODUN, which deals with the CWC and BWC. Other relevant groups include CONOP (non-proliferation), CONOC (non-proliferation of chemical and biological weapons), POLARM (armaments policy) and the dual-use group. These groups are attended by experts from the national capitals and meet approximately once every two months. The meetings of the Council and its working groups are serviced by a general secretariat. Within the secretariat's directorate for multilateral affairs and security there is a unit dealing with security, non-proliferation, arms exports, disarmament and the control of dual-use goods which services CODUN. The Commission is also represented on the working groups, usually by officials of the security issues unit.

The working groups bring together national representatives to discuss CBW issues of common concern to the

member states and the coordination of their policies in international organisations and negotiations. Much political attention is currently focused on the BWC protocol negotiations. Because of the intergovernmental nature of the CFSP, the presidency has a great role to play in launching new policy initiatives. Therefore, the amount of activity on a particular issue can depend on how concerned a particular presidency is with the issue. In its work programme, Germany, which holds the EU presidency until the end of June, stressed the importance of a common EU position in the negotiations. On 4 March 1998 under the UK presidency, the EU had adopted its first common position on the BWC protocol. Early in 1999 national representatives in CODUN began negotiating an updated common position. Once agreed within the working group the draft was referred to CoPo and COREPER for their approval, after which it was submitted to the General Affairs Council and approved without debate on 17 May.⁴ Recently, some CODUN meetings have been preceded by meetings of technical experts to discuss BWC issues in more detail. Frequently, these are the same experts who travel from their capitals to attend the AHG meetings in Geneva. These meetings not only facilitate the coordination of national policies among the fifteen but also often result in the submission of working papers to the AHG. The EU has been especially active in matters relating to declarations, such as formats, triggers and definitions. CODUN meetings also discuss significant issues related to CWC implementation and explore areas on which the member states can cooperate and coordinate their policies. However, as the CWC entered into force over two years ago, many issues are of a more routine nature and are dealt with by the EU delegations in The Hague, rather than being referred to Brussels.

Away from Brussels, Article 19.1 of the Treaty of Amsterdam obliges EU member states to “coordinate their action in international organisations and at international conferences. They shall uphold the common positions in such fora”. The Treaty also requires, under Article 20, that “the diplomatic and consular missions of the Member States and the Commission Delegations in third countries and international conferences, and their representations to international organisations, shall cooperate in ensuring that the common positions and joint actions adopted by the Council are complied with and implemented”. These obligations ensure there is active cooperation and coordination between the delegations of EU states in both the AHG and the OPCW.

With the AHG deliberations at a crucial stage, there is a high level of political interest among EU member states to influence the final shape of the BWC protocol. The member states have taken a number of measures within the Union framework to promote a rapid conclusion of the negotiations. EU delegations to the AHG usually hold group meetings prior to meetings of the Western Group. Since the creation of the AHG the member states of the Union have produced numerous working papers, often alone, but also often in cooperation with other Union member states. The focus of the Union’s technical expert meetings in Brussels has been reflected in the numbers of working papers produced by EU states on declaration-related issues. However, the EU does also have concerns in other areas. The UK presidency organised a seminar on chemical and biological

terrorism on 23–24 March 1998 which brought together 27 countries, including EU member states, accession states, the USA and other G-8 members. One of the aims of the EU with regard to the BWC, as stated in both the 1998 and 1999 common positions, has been “furthering understanding between representatives of the European industry and those involved within the negotiations in the Ad Hoc Group”. In view of this, the UK also hosted a seminar on the BWC for European industry on 13 May 1998. The Commission provided funding for the seminar. Within the AHG the delegation holding the presidency makes statements on behalf of the Union and also holds many meetings on the margins of the group with states outside the EU. These meetings can sometimes involve only the presidency, but often the EU is represented by the “troika” in such bilateral encounters. To help with the additional burden of holding the presidency, the delegation is usually supported by officials from the unit for security, non-proliferation, arms exports, disarmament and the control of dual-use goods of the Council secretariat.

However, the main points of reference for EU member states in the AHG are the common positions which have been adopted by the Union. According to Article 15 of the Treaty of Amsterdam, common positions are intended to “define the approach of the Union to a particular matter of a geographical or thematic nature”. The objective of the most recent common position on the BWC protocol is “to promote the conclusion of the negotiations, in the BTWC Ad Hoc Group, on a legally binding protocol establishing a verification and compliance regime that will effectively strengthen the BTWC Convention [*sic*]”. According to the common position, the EU will focus on a range of issues which member states believe are central to an effective protocol, namely declarations, follow-up visits, clarification procedures, investigations, the establishment of a small organisation and international cooperation measures. In support of these objectives, EU member states agreed to pursue joint positions in the AHG, issue demarches to urge support for the common position and encourage contacts between governments and industry. The adoption of common positions is important because, according to Article 15 of the Treaty of Amsterdam, “Member States shall ensure that their national policies conform to the common positions”. Besides being binding on the member states they carry weight with other AHG participants because of the number and diversity of supporting countries. The May 1999 common position was endorsed on 10 June by the associated countries of central and eastern Europe, plus Cyprus, Iceland, Liechtenstein, Norway and Switzerland. However, common positions deal mainly with general principles to which it is difficult to object and can therefore be seen as representing a lowest common denominator between the fifteen member states. It appears likely that as the negotiations focus more on technical details, common positions will be less useful, as differences of approach still exist between the member states on more detailed issues.

The BWC and CWC are currently at very different stages of their evolution. The AHG attracts political attention because the protocol is still under negotiation and its eventual shape is not yet finalised. In contrast, the CWC is well into the routine implementation phase, which does not attract the same degree of political attention as the negotia-

tions in Geneva. The EU has not adopted any common positions regarding the CWC, although consultations among member states during the negotiation and signature phases ensured coherence. Significant CWC matters are discussed in Brussels by CODUN, but most issues related to the routine implementation of the Convention are discussed locally by delegations in The Hague. EU member states do hold occasional meetings at the OPCW. Under the current German presidency these have become a regular monthly event, but much depends on the enthusiasm and resources of the delegation holding the presidency. As it is not a recognised regional group within the UN system the EU cannot play a formal role in procedural matters unlike the WEOG group. The WEOG group, of which all the EU states are members, is specifically mentioned in the CWC and plays an important procedural role, particularly with regard to electing the members of various OPCW organs.

Export controls for dual-use goods

The EU, and before it the European Community, has been concerned about the proliferation of dual-use goods for a number of years, particularly in the aftermath of the Iran-Iraq war. Following pressure from the Parliament, on 20 February 1989 the General Affairs Council adopted a regulation controlling the export of eight dual-use chemicals. In 1991 the Parliament called for a complete ban on the export of technology and raw materials intended for the production of nuclear, biological and chemical weapons and in 1992 the Commission issued a proposal for the establishment of a regime controlling the export of certain dual-use goods. However, Council approval was not achieved until December 1994 and the regime did not come into effect until July 1995. The regime has a dual legal base, resting on a CFSP joint action and a Community regulation.⁵ This reflects the interdependence between trade and foreign policy and the fact that within an EU framework export controls fall between the common commercial policy (which is the Commission's area of competence) and the national security concerns of the member states. The joint action covers political decisions such as the goods and destinations subject to controls, while the regulation sets out the procedure for the implementation of the regime. The goods covered by the joint action include those covered by the Australia Group and, by a 1997 amendment, also those on the CWC schedules. The joint action was most recently amended in March 1999 when the Council adopted a new decision introducing further amendments and incorporated all previous amendments into a single consolidated text.⁶

The EU's dual-use regime does not constitute a common export policy for dual-use goods. It is based instead upon the mutual recognition of national policies rather than the development of a common EU policy. According to a 1998 report by the Commission on the functioning of the regime, while it had indeed permitted the free movement of most dual-use goods within the Union, "the Regulation and the way it has been applied in practice has not succeeded in creating an effective common export control regime which is both easy to administer and cost-effective to comply with".⁷ As the regime relies upon mutual recognition of policies between the member states, administrative cooperation plays

a very important role. The regime has succeeded in creating a network of national export control officials who consult regularly on specific exports. They also meet between four to six times per year in the Coordinating Committee to discuss policy issues. Recognition of the trade and economic aspects of export controls has also meant a larger role for the Commission in an area which was previously the preserve of member states. The Commission participates in the Australia Group, the NSG and the MTCR. Following a review of the implementation of the dual-use goods regime, the Commission's 1998 report concluded that the difficulties experienced were inherent to the regime itself and that "only a more harmonised export control regime, combining elements of common policy with reinforced administrative cooperation will produce a system satisfactory to the practical needs of exporters and public authorities, ensuring both swift and smooth enforcement of the shared non-proliferation objectives."

The Commission therefore also submitted a proposal for updating and improving the regime in May 1998.⁸ The proposal included a number of key elements. Among these was the creation of a general community licence for exports to certain countries, reflecting the substantial amount of *de facto* convergence of licensing policies to these countries.⁹ The proposed regulation would also close a major loophole in the current legislation which specifies that the control of technology transfers is limited to "tangible forms". The proposed regulation would extend controls to cover technology transfers by fax, telephone and the internet. Administrative cooperation would be further strengthened by reinforcing the exchange of information and consultations between member states. Finally, the proposal would also do away with the dual legal basis of the current regime. Since 1994, the European Court of Justice has twice established exclusive Community competence for export controls concerning dual-use goods and stated that neither the nature of the goods nor the fact that controls are adopted in the light of foreign policy or security considerations can limit that competence.¹⁰ The Commission's proposal therefore, is based solely on the "first pillar" of the Treaty, not in combination with the Treaty's "second pillar" CFSP provisions. However, the Commission has recognised the need for a balanced approach and therefore the responsibility for updating the list of controlled goods is delegated to a "list group" consisting of the member states. Since its introduction last May the proposal has been discussed by the Council's dual-use working group. The introduction of the new regime was a priority of the German presidency, which ends on 30 June. The proposal was discussed at a meeting of COREPER on 5 May by which stage it had achieved widespread consensus among member states. It appears that only minor technical points remain to be resolved, although France still expresses the opinion that the regime should once again be based on a Community regulation and a CFSP decision.

Support for non-proliferation in the CIS

EU support to CBW non-proliferation in the Commonwealth of Independent States is focused on two main programmes. The largest amount of financial support goes to

the International Science and Technology Centre (ISTC) in Moscow, with a smaller amount going to the Science and Technology Centre of Ukraine (STCU) in Kiev. The second major programme supports the conversion of former Russian chemical weapons production facilities (CWPFs). Both programmes are financed through the Technical Assistance to the Commonwealth of Independent States (TACIS) programme. TACIS was conceived at the 1990 Rome European Council and was formally established in July 1991. The current regulation applies until the end of 1999. The Commission has proposed a new regulation which would run from 1 January 2000 to the end of 2006. From 1991 to 1997 the EU had committed ECU 3,300 million to the TACIS programme, which is funded from the general budget of the European Communities.

EU relations with Russia are currently being strengthened and deepened. A "Partnership and Cooperation Agreement" (PCA) between the two parties entered into force in December 1997, while the recent Cologne European Council adopted the "Common Strategy of the European Union on Russia".¹¹ The PCA provides for meetings between the EU and Russia at all levels from heads of state to expert groups. Many such expert meetings have taken place between Russia and the EU troika on non-proliferation issues, for example. The common strategy is intended to serve as a framework for all EU relations with Russia. Under the heading of specific initiatives, the strategy said that the EU "will consider developing a consultation mechanism, in addition to 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". Additionally the strategy said that the Union "will examine the scope for Joint Actions and Common Positions concerning the safe management of biological, and chemical materials, ... notably on the basis of international conventions ... Particular consideration will be given to the International Science and Technology Centre in Moscow". According to the strategy, work on these actions will begin by the end of 1999. The common strategy on Russia was the first use of this new CFSP instrument and the EU is now preparing common strategies on Ukraine and on the Mediterranean which could also have an emphasis on non-proliferation and disarmament issues.

The ISTC grew from a German initiative in 1991 and was officially founded in 1994. Alongside the European Communities and Russia, the USA and Japan are also signatories to the international agreement establishing the centre. Other CIS countries have acceded to the ISTC agreement, including Georgia, Armenia, Belarus, Kazakhstan and Kyrgyzstan. For political reasons Ukraine did not accede to the ISTC agreement and instead the STCU was established in Kiev in 1995 funded by the EU, the USA, Canada and Sweden. The principal objective of both the ISTC and the STCU is "to give weapons scientists and engineers, particularly those with knowledge and skills related to weapons of mass destruction (nuclear as well as biological and chemical weapons) or missile delivery systems, the opportunity to redirect their talents towards peaceful activities".¹² Figures from October 1996 showed that the ISTC

had provided ECU 96 million to fund 324 projects benefiting around 15,000 scientists, of whom around 3,000 had been hard core military researchers. The EU's contribution to the ISTC almost equals that of the USA, since 1994 it has provided some ECU 45 million through the TACIS programme. The Union provided ECU 3 million to the STCU in 1998.

The other major EU non-proliferation initiative funded by TACIS relates to Russia's chemical demilitarisation programme. TACIS funding is not directed towards the destruction of chemical weapons, although there are a number of bilateral programmes in this area, rather it is intended to support the conversion of former CWPFs. The use of TACIS funding for the Russian chemical demilitarisation programme was a Dutch initiative and on 21 May 1997, under the Dutch presidency, the Council adopted a declaration stating that:

the European Union is prepared to offer assistance in fields related to the CWC, once Russia has ratified the Chemical Weapons Convention. To that end the European Union, subject to consultation with Russia through the normal TACIS country procedures, is prepared to allocate up to 10 to 15 MECU from the TACIS programme for the period 1997-99 to projects related to this area of CWC implementation. The approval of projects will be conditional upon the deposit by the Russian Federation of its instrument of ratification. The implementation of this assistance should be accompanied by a dialogue between the European Union and the Russian Federation.

The dialogue between the Union and Russia began under the UK presidency of the EU in the first half of 1998.

To date the EU has committed ECU 10 million (3 million in 1997, 4 million in 1998 and 3 million in 1999) to the chemical demilitarisation programme, although none of this money has yet been spent. The beneficiary of the funding is the Russian Ministry of Economy which is responsible for the "Federal Programme for Conversion of the Former Chemical Weapons Production Facilities" with GosNIIOKhT as the main executing agency. The funding is primarily directed at former chemical-weapons facilities in Dzerzhinsk and Gornyy. Earlier phases of the funding were designed to cover impact studies and risk assessments, environmental assessment and monitoring systems, health and safety measures for staff and the local population and so on. The 1999 funding is directed towards the implementation of the conversion process once the conversion requests are approved by the OPCW. A recent report on the implementation of the CFSP said that there had been insufficient progress in the area of defence conversion and called for substantial EU aid for this process. To date the TACIS funding is confined to Russia itself, although the former Soviet chemical weapons programme involved facilities across the CIS. In addition, there is currently no equivalent Union programme supporting the conversion to peaceful purposes of former Soviet biological weapons facilities. However, recent developments could indicate changes in this regard.

In addition to the multilateral TACIS funding, a number of EU member states also have bilateral agreements with Russia in relation to the destruction of chemical weapons. Most of these focus on the Kambarka storage facility. On

22 December 1998 the Netherlands and Russia signed a framework agreement under which the Netherlands will be rendering some \$12.5 million technical assistance to the operations in Kambarka. The Netherlands will participate in four projects: a mobile environmental laboratory to monitor destruction efforts, a decontamination system for workers, a station for transferring the 6,500 tonnes of bulk-stored lewisite into more manageable containers, and destruction of the lewisite. More detailed technical discussions are due to be held in June. During 1993–94 Sweden provided SK 1 million for risk assessment work at Kambarka and allocated a further SK 2.6 million to the second phase of its assistance. Finland is also contributing FM 2 million, which is intended to be used in conjunction with the Dutch funding. As of the 1998 conference in The Hague, Germany had supplied equipment worth DM 16 million, with a further DM 9.5 million worth of equipment to be delivered in 1998. Italy has agreed to provide support to the construction of the destruction facility at Kizner, including support for the creation of the necessary social infrastructure. The draft agreement between Italy and Russia was submitted to the Russians in early 1999 and their comments are currently being studied by the authorities in Rome. The Russians have also initiated discussions with France and the UK. All of these bilateral offers from Union member states are being coordinated with the funding provided under the multilateral TACIS programme.

References and Notes

1. The EU came into being with the entry into force of the Treaty of Maastricht in 1993 and was based on the existing European Communities. The member states are: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom.
2. Pablo Benavides, Director-General DG XVII [the Energy Directorate of the Commission], "Safeguards and Non-Proliferation in the EU: Some Reflections on 40 Years of EURATOM Safeguards and Some Thoughts Concerning Future Developments".
3. *La Stampa*, "Sudan: Foreign Minster says signing chemical weapons ban 'overture' to USA", 1 June 1999, as in BBC-SWB. See also *News chronology* 29 April.
4. Document 99/346/CFSP, reproduced in: Official Journal L 133/3, 28 May 1999. This common position is discussed in *Progress in Geneva* below. See also *News chronology* 17 May.
5. General Affairs Council, "Council Decision of 19 December 1994 on the joint action adopted by the Council on the basis of Article J.3 of the Treaty on European Union concerning the control of exports of dual-use goods", document 94/942/CFSP. In: OJ L 367/8 31 December 1994; and General Affairs Council, "Council Regulation (EC) No. 3381/94 of 19 December 1994 setting up a Community regime for the control of exports of dual-use goods". In: OJ L 367/1 31 December 1994.
6. See *News Chronology* 9 March.
7. European Commission, "Report to the European Parliament and the Council on the Application of Regulation (EC) 3381/94 Setting up a Community System of Export Controls Regarding Dual-Use Goods", document COM(98)258, 15 May 1998. In: OJ C 292 21 September 1998.
8. European Commission, "Proposal for a Council Regulation (EC) Setting up a Community Regime for the Control of Exports of Dual-Use Goods and Technology", document COM (98)257, 15 May 1998. In: OJ C 399/1 21 December 1998.
9. The countries suggested in the Commission's proposal are, Australia, Canada, Japan, New Zealand, Norway, Switzerland and the USA, and also three accession states, the Czech Republic, Hungary and Poland.
10. European Court of Justice, case C-70/94, "Fritz Werner Industrie-Ausrüstungen GmbH v. Federal Republic of Germany". In: ECR I-3189 1994; and European Court of Justice, case C-83/94, "Criminal proceedings against Peter Leifer and others". In: ECR I-3231 1994.
11. European Council press release 8199/99, 4 June 1999
12. European Commission, "Science and technology centres in Russia and Ukraine", document MEMO/98/61, 6 August 1998.

This article represents the initial results of a larger ongoing project. Comments are most welcome, preferably by e-mail to dfeakes@opcw.org.

Developments in the Organization for the Prohibition of Chemical Weapons

The period under review, from mid-March to early June has mainly been occupied with preparations for the fourth session of the Conference of the States Parties which will convene during 28 June–2 July. A number of issues which could not be resolved by the third session, and which were referred to the Executive Council for action, remain unresolved. On 29 April the OPCW marked the second anniversary of the entry into force of the Chemical Weapons Convention. The OPCW has now conducted almost 500 inspections in around 30 states parties. During the period under review the OPCW's two subsidiary bodies, the Sci-

entific Advisory Board and the Confidentiality Commission held their second and third meetings respectively.

Four states ratified or acceded to the Convention during the period under review. In chronological order they were: Holy See, Nigeria, Sudan and Estonia. At the time of writing, therefore, there are 125 ratifying and acceding states and 45 signatory states. The Director-General recently wrote to the governments of all 45 signatory states reminding them of the restrictions on trade in Schedule 2 chemicals which will take effect from 29 April 2000 and which should serve as an incentive for states to ratify or accede to

the Convention. When addressing the fifteenth session of the Council the Director-General urged states parties to increase their efforts to encourage non-member states to join the Convention. He also used the occasion of the second anniversary of entry into force to place an appeal to states to ratify or accede to the Convention in the *International Herald Tribune*. The External Relations Division of the Secretariat is continuing its activities aimed at enhancing universality, particularly through the staging of regional seminars. Seminars have been held in Suriname, Slovenia and Malta during the period under review.

With the fourth session of the Conference only a few weeks away a number of issues referred to the Council for resolution have yet to be resolved. Most important among these is the budget for 2000, on which informal consultations are still continuing. Negotiations on the 2000 budget appear to be as time-consuming as those last year on the 1999 budget, with a Council meeting scheduled for 23 June. Other factors have also affected the budget negotiations. The absence of an initial industry declaration from the USA is a major problem as it affects the Secretariat's ability to effectively plan and budget for its industry verification activities in 2000. This "technical non-compliance" by the USA has also given rise to attempts by other states parties to limit, through the budget, the burden of inspection procedures as well as the number of inspections on their own industries while competitors in the USA are not being inspected. The consequent uncertainty surrounding industry inspections in 2000 is also holding up the approval of facility agreements for Schedule 2 plant sites. Another issue awaiting resolution is the staff regulations and in particular the length of tenure of OPCW staff members. The lack of a resolution to this long-standing issue is beginning to take its toll on staff morale and the relatively high rate of staff turnover in the first few months of 1999 may not be a coincidence. As with the third session of the Conference, it appears possible that the fourth session will also be preoccupied with issues of a budgetary and administrative nature. However, these issues are under active consideration within the Council, and there is a great deal of political pressure to ensure that they are resolved by the time of the fourth session of the Conference.

Executive Council

During the period under review the Executive Council held one regular session, its fifteenth, during 26–29 April. This was the last session of the Council with the members elected by the second session of the Conference. On 12 May the new members elected by the third session took their seats. The chairman of the Council Mr Kryzstof Paturej (Poland) also finished his term of office on 11 May. At its fifteenth session the Council elected Ambassador Ignacio Pichardo Pagaza (Mexico) to serve as its chairman until 11 May 2000 and elected the representatives of Australia, Iran, Slovakia and South Africa to serve as vice-chairmen for the same period. The Council also held two formal meetings, its fourth and fifth, on 26 March and on 3–4 June respectively. A sixth meeting will be held just before the fourth session of the Conference, on 23 June, to reach agreement on a number of outstanding issues.

Status of implementation of the Convention The Director-General submitted a *Status of Implementation Report* to the fifteenth session of the Council covering the period up to 1 March. As has become the norm, this document and all its annexes were classified as Highly Protected and were discussed by the Council in closed session.

The Director-General also reported that 30 states parties still had to submit their initial declarations under Articles III, IV, V and VI. With regard to other notifications, he reported that: 66 states parties had provided notification of points of entry for inspection teams; 54 had provided standing diplomatic clearance numbers for non-scheduled aircraft, 40 had provided information on legislative and administrative measures; and 88 had provided notification of their national authority.

Destruction plans As of 29 April, 8.4 million chemical munitions and bulk containers and 70,000 tonnes of chemical agent had been declared to, and verified by, the OPCW. Inspectors had witnessed the destruction of 577,000 items and 2,371 tonnes of agent. The Council held an informal meeting on 23 April to consider issues relating to the destruction of chemical weapons and to the destruction and conversion of chemical weapon production facilities (CWPFs). A similar meeting will be held before the sixteenth session of the Council.

The Council continued to consider, on a case by case basis, chemical weapons destruction processes which result in scheduled chemicals. As part of its Alternative Technologies and Approaches Program, the USA is evaluating alternatives to the incineration of VX. It submitted to the fourth meeting of the Council a request to destroy 1.07 metric tons of VX by hydrolysis at the CAMDS destruction facility in Tooele. The USA submitted a similar request to the fifteenth session of the Council, this time for the hydrolysis of 10.3 metric tons of VX. Both requests were approved by the Council along with verification and transparency measures similar to those approved by the twelfth and fourteenth sessions of the Council.

The USA submitted to the fifth meeting of the Council a request to destroy limited quantities of GB and VX using a monoethanolamine based process. The destruction activities planned for 1999 and onwards are designed to deal with recovered chemical warfare material at various sites around the USA as part of the non-stockpile programme. As the destruction process produces waste containing Schedule 2B chemicals the Council also considered appropriate verification and transparency measures, including on-site monitoring of the destruction and notification when the waste products are moved to, and destroyed at, commercial treatment, storage and disposal facilities. The meeting approved the request on the understanding that destruction was limited to the approximate quantities and to the locations specified. Destruction operations resulting in scheduled chemicals will continue to be considered by the Council on a case by case basis.

India and another state party submitted to the fifteenth session of the Council agreed detailed plans for the verification of the destruction of chemical weapons at chemical weapon destruction facilities (CWDFs). Consideration of the plans was deferred to the fifth meeting of the Council at which they were approved.

Combined plans for destruction and verification of CWPFs As of 29 April, 60 CWPFs had been declared by 9 states parties (China, France, India, Japan, Russia, UK, USA and two others). Of these, 11 had been certified by OPCW inspectors as destroyed.

The fifteenth session of the Council considered and approved the combined plans for destruction and verification for the BZ munitions fill facility at the Pine Bluff Arsenal, USA which had been submitted to the fourteenth session. Combined plans for destruction and verification for two facilities at Rocky Mountain Arsenal in the USA, the HD Fill Facility and the HD Distillation Facility, were submitted to the fifth meeting of the Council. However, consideration of the plans was deferred until a meeting of the Council to be convened soon after the fourth session of the Conference. The Council noted with concern that it was unable to take a decision on these plans and stressed that such plans should be approved in a timely manner.

Requests for conversion of CWPFs As reported in the previous quarterly review, Russia's request for the conversion of a CWPF at Novocheboksarsk was considered by the fourth meeting of the Council. The Council recommended that the request be approved by the fourth session of the Conference. The fourth meeting also took a decision on changes in chemical process equipment or plans for new types of chemical products at a converted facility. Under this decision, if a state party is planning such changes to a converted facility it must notify the Secretariat 90 days before the changes are to take place. The Secretariat is to then forward the notification, along with its evaluation of whether the changes meet the requirements of Part V.71 of the Verification Annex, to the Council not later than 60 days before the changes are due to take place. If an objection is received from a Council member within 30 days of receiving the notification, the Council will consider the issue and forward its recommendation to the Conference. This decision is subject to confirmation by the fourth session of the Conference. The fifteenth session of the Council recommended that a conversion request submitted by a state party be approved by the fourth session of the Conference. Russia submitted another conversion request to the fifth meeting of the Council. The Council decided to initiate informal consultations on the request, for a CWPF at Volgograd, with a view to taking a decision at its sixth meeting. If agreement can be reached in time, this request will also be recommended to the fourth session of the Conference for approval. It is estimated that conversion requests for up to 23 CWPFs will eventually be submitted by states parties.

Facility agreements The fifteenth session of the Council considered five facility agreements for Schedule 2 plant sites in Switzerland. These were the first Schedule 2 facility agreements to be considered by the Council since entry into force. However, due to the lack of agreement on the frequency of inspections of Schedule 2 plant sites, consideration was deferred until the fifth meeting of the Council, which again deferred consideration until the sixteenth session. The Council did note though, that the five agreements were, with the exception of the issue of the frequency of in-

spections, in full compliance with the Convention and the model facility agreement for Schedule 2 plant sites.

The fifteenth session of the Council deferred until the fifth meeting consideration of facility agreements for a chemical weapon storage facility (CWSF), a Single Small-Scale Facility (SSSF) and a Schedule 1 facility. Also under consideration by the fifth meeting were facility agreements for two Schedule 1 facilities in the USA, the SSSF at Edgewood Area, Aberdeen Proving Ground and the Protective Purposes Facility (PPF) at Fort Leonard Wood. However, the Council deferred consideration of all these agreements until a meeting to be convened soon after the fourth session of the Conference. The Council noted with concern that it was unable to take a decision on these facility agreements and stressed that such agreements should be approved in a timely manner.

As of 29 April the Council had only approved 46 facility agreements: 11 for CWPFs; 21 for CWSFs; 5 for CWDFs (transitional verification agreements); and 9 for Schedule 1 facilities. For chemical weapons and Schedule 1 facilities facility agreements should have been concluded not later than 180 days after entry into force.

Model facility agreements Following negotiations by the facilitator, Mr Ali Soltanieh (Iran), in the Committee of the Whole, the fifteenth session of the Council adopted a model facility agreement for CWPFs, subject to confirmation by the fourth session of the Conference. Some Council members expressed concern about the implications of the model agreement for those agreements already approved. It was agreed that states parties are not obliged to change existing agreements. The Council requested the Secretariat to conclude the ongoing negotiations on facility agreements, either on the basis of the model or on the basis of the text already under discussion. States parties can draw upon the existing facility agreements, provided that the new agreements conform with the provisions of the Convention and retain the general form and content of the model agreement.

Costs of inspections of old and abandoned chemical weapons Following agreement at the fourteenth session of the Council on the cost of inspections of abandoned chemical weapons, the friend of the chair on this issue, Mr Urs Schmid (Switzerland), submitted to the fifteenth session of the Council a draft decision on the costs of inspections of old chemical weapons (OCW). This decision would have the OPCW covering the costs of initial and any further inspections but would oblige the inspected state party to pay costs related to further verification measures for OCW confirmed as such by the Secretariat. However, the Council could not reach consensus on the draft decision. While states parties must pay for the verification and destruction of their chemical weapons under Article IV.16, the so-called "possessor pays" principle, the Convention establishes a separate verification regime for OCW which does not specify clearly whether states parties or the OPCW should pay for the verification of OCW. Therefore, certain states parties argue that the "possessor pays" principle does not apply to OCW and that the costs of their verification should be attributed to the OPCW. Informal consultations are scheduled to continue with a view to reaching consensus before the fourth session of the Conference.

Transfers of saxitoxin As previously reported, the recommendation of the second Council meeting for a change to the Verification Annex would be considered as approved after 90 days if no objections were received from states parties. No objections had been received by 15 April and the recommendation will therefore enter into force 180 days later, on 12 October. However, the interim practical guideline on transfers of saxitoxin approved by the twelfth session of the Council will expire on 6 July. In this light the fifteenth session of the Council decided to extend the interim practical guideline until 12 October.

Chemical industry issues The Secretariat submitted to the fifteenth session of the Council a general report on industry verification issues. This report stated that between entry into force and 16 April 1999 the Secretariat had received industry declarations from 48 states parties and had carried out 147 industry inspections in 27 of those states parties. The report went on to list a number of issues which had made it difficult for the Secretariat to assess the data obtained from declarations and inspection activities: low concentration limits in relation to Schedule 2 and 3 plant site declarations; declaration of aggregate national data; captive use; definition of "discrete organic chemicals" (DOCs); and declarable Schedule 1 chemicals.

As reported in a previous quarterly review, the thirteenth session of the Council directed the Secretariat to request further information from states parties regarding the criteria for making Schedule 2 and 3 declarations and to report to its fifteenth session. The Director-General accordingly submitted the report which included responses received from 17 states parties. The Council decided that it would return to this issue on the basis of an analysis of states parties' responses prepared by the Secretariat.

The fifteenth session of the Council also considered the inspection of facility records during initial Schedule 2 inspections. According to Part VII.3 and 4(a) of the Verification Annex, 30 days after entry into force each state party must submit initial declarations for Schedule 2 plant sites covering the previous three calendar years. However, this provision has led to differences of interpretation during Schedule 2 inspections. On one hand, it has been argued that during an initial Schedule 2 inspection the inspectors should have access to all the facility records on which the initial declarations were based — i.e., the records from 1994, 1995 and 1996 for a state party which ratified in 1997; on the other, it has also been argued that only the records for the three years prior to the initial inspection are actually subject to verification — i.e., 1996, 1997 and 1998 for an initial inspection taking place in 1999. Pending clear guidance from the Council or the Conference on this issue, the Secretariat has decided to follow the latter interpretation unless it finds inconsistencies in the levels of production, processing or consumption, in which case it will seek access to the records from the earlier period. During the fifteenth session Council members expressed differing views and requested further discussion of the issue, also in the context of the requirements for inspections of Schedule 3 and DOC plant sites, at its fifth meeting. At this meeting the Council members requested the Secretariat to issue a revised paper which would also tackle the issue of the period subject to

verification for Schedule 3 and DOC plant sites and take into account the various views expressed.

The issue of the selection of Schedule 3 plant sites for inspection has been on the Council's agenda since its eleventh session, when the Secretariat announced that it was about to initiate Schedule 3 inspections. As reported in the previous quarterly review, the Secretariat had recently modified the way in which Schedule 3 plant sites are selected for inspection. Two national papers were submitted to the fifteenth session of the Council suggesting changes to the Secretariat's new approach. The first examined the Secretariat's approach and proposed an alternative method, while the second focused on ways to achieve the "equitable geographical distribution" of Schedule 3 inspections specified in the Convention. The fifteenth session of the Council also returned to the issue of the risk assessment for Schedule 2 plant sites which had been discussed at its previous session and a national paper on the risk rating of industrial sites was submitted. Discussion of both of these issues was deferred until the Council's sixteenth session.

Part IX.22 of the Verification Annex states that the verification of states parties' DOC declarations will start "at the beginning of the fourth year after entry into force of this Convention unless the Conference, at its regular session in the third year after entry into force of this Convention decides otherwise". Therefore, in accordance with Section C of Part IX, a number of preparations were underway during the period under review to ensure that the Conference would be able to take a decision on DOC inspections. Part IX.23 of the Verification Annex requires the Director-General to submit to the Conference in the third year after entry into force a report outlining the Secretariat's experience in implementing the Annex's provisions relating to Schedule 2 and 3 chemicals and to DOCs. This report was submitted to the fifteenth session of the Council for its consideration. The Council requested the Director-General to submit an expanded version of this report to the fourth session of the Conference. Part IX.24 requires the Director-General to submit to the Conference a report on the distribution of resources available for verification between PSF plants and other chemical production facilities. This report is being drafted. According to Part IX.25 of the Verification Annex, "at its regular session in the third year after entry into force of this Convention, the Conference, upon the advice of the Executive Council, shall decide on which basis (e.g., regional) proposals by States Parties for inspections should be presented to be taken into account as a weighting factor in the selection process specified in paragraph 11". However, at the time of the fifteenth session of the Council, no proposals had been submitted by states parties and the Council had not yet agreed what advice to offer the Conference. The fifth meeting further considered the issue and decided that more consultations would be necessary before it could offer any advice. It requested the Secretariat to facilitate the consultations by providing background information from the negotiations on the Convention in the Conference on Disarmament. The Council decided to inform the fourth session of the Conference that it would submit a substantive recommendation on this issue in time for the fifth session of the Conference in 2000. The issue was also included in the provisional agenda of the sixth meeting of the Council on 23 June, for further consideration.

UN relationship agreement The Council again considered the draft relationship agreement with the UN. Informal consultations had been held prior to the fifteenth session. The main outstanding issue appeared to be references to the Security Council in those paragraphs dealing with the reporting of cases of non-compliance. The Council adopted a draft text which it referred to the fourth session of the Conference for its approval. This is a revised version of the draft agreement which the Council submitted to the third session of the Conference, and which states parties were unable to reach consensus upon then.

Reports The fifteenth session of the Council considered both the “draft report of the Organisation on the implementation of the Convention (1 January—31 December 1998)” and the “report of the Executive Council on the performance of its activities from 5 September 1998 to 29 April 1999”, but deferred further consideration and approval to the fifth meeting of the Council. At this meeting the Council approved the report on the performance of its activities for submission to the fourth session of the Conference and referred the draft report of the OPCW to the Conference for consideration and approval. In accordance with the financial regulations the Director-General also submitted to the Council the “annual report of the Office of Internal Oversight for the period from 1 July 1997 to 31 December 1998”, which was also submitted to the Conference.

Financial issues The Director-General reported to the fifteenth session of the Council on the status of contributions by states parties to the 1999 budget. Of the total 1999 assessments of NLG 108,040,000 the Secretariat had received approximately NLG 78,000,000 (72.2 per cent) by 15 April. Of the then 121 member states only 36 had paid in full, 28 had paid partially and 57 had not paid at all. As reported in previous quarterly reviews Council members had failed to set a precedent for others to follow. As of 31 March only 14 of the 41 members of the Council had paid in full, 13 had paid partially and 14 had not paid at all. The collection rate for the 1998 budget stood at 95.3 per cent with 61 members states having fully paid, 23 having partially paid and 37 having not paid at all.

In the run-up to the fourth session of the Conference, states parties have been engaged in intensive negotiations on the draft 2000 budget. As reported in the previous quarterly review the first draft of the budget was circulated to member states in February with an increase of 12 per cent on the 1999 budget. A revision of this draft was circulated on 12 April with the increase falling from 12 to 11 per cent. The revised draft budget was considered by the fifteenth session of the Council and informal consultations under the friend of the chair, Mr Hendrik Regeur (Netherlands), are continuing. A further revised draft, with no increase on the 1999 budget, was circulated on 1 June and was considered by the fifth meeting of the Council. Although there is now agreement on most of the budget, consensus has not yet been achieved on the detailed assumptions for verification, in particular for industry inspections. Uncertainty as to when the USA will be able to submit its industry declaration is partly responsible for this situation. Like the 1999 budget, the draft 2000 budget also reserves 50 Schedule 2

inspections for states parties which have yet to submit their industry declarations, but it predicts that the US declaration will be submitted in late 1999, allowing 14 initial Schedule 2 inspections to be conducted by the end of 1999, with the other 36 taking place in early 2000. Some Council members have proposed delaying any Schedule 2 re-inspections and also delaying the launch of DOC inspections until after all initial Schedule 2 inspections have been completed. However, other Council members argue that the OPCW should not give the impression that no Schedule 2 re-inspections will take place and also that the launch of DOC inspections should not be linked to progress with Schedule 2 inspections. The second unresolved budget issue relates to the provision of funds for the translation of inspection-related documents. Consensus could not be reached on these remaining issues at the fifth meeting and the Council requested Mr Regeur to continue the informal consultations. The Council will meet for its sixth meeting on 23 June to further consider the budget and submit it to the Conference for approval.

The Council held an informal meeting on 31 March to consider the “draft medium-term plan 2000–2003”. The plan, as revised by the meeting, was submitted to the fifteenth session which deferred consideration until its fifth meeting. This meeting recommended that the fourth session of the Conference consider and note the draft plan.

The Advisory Body on Administrative and Financial Matters (ABAF) held its fifth session during 1–5 March. It considered a range of issues, including the draft 2000 budget, and made a number of recommendations. It also requested the Secretariat to prepare calculations of the financial impact on the Secretariat of five-year, seven-year and nine-year periods of tenure. The ABAF re-elected Mr Arnold Cals (Netherlands) as its chairman. The following three members of the ABAF resigned their posts: Mr Reza Najafi (Iran); Mr Armand Arriazola (Mexico); and Mr Gianfranco Tracci (Italy). They were replaced by: Mr Hadi Farajvand (Iran); Ms Norma Suárez Paniagua (Mexico); and Mr Gianpaolo Malpaga (Italy). The sixth session of the ABAF will meet during 18–21 October.

Staffing issues The Council spent much of its time during the period under review discussing staff-related issues. As reported in previous quarterly reviews, the staff rules and regulations should have been finalised by the time of the third session of the Conference. However, despite extremely intensive consultations no agreement was reached and the Conference delegated to the Council the authority to finalise the staff regulations, pending final confirmation by the fourth session of the Conference. However, only weeks away from the fourth session and despite further intensive consultations there is still no final agreement on the regulations. The main obstacle to agreement remains the length of tenure of staff members in the Secretariat. The fifth meeting of the Council requested the new friend of the chair on this issue, Ambassador Lúbomír Kopaj (Slovakia), to continue consultations in the few weeks remaining before the fourth session of the Conference. The staff regulations will be considered again by the sixth meeting of the Council, immediately prior to the Conference.

The fifteenth session and the fifth meeting of the Council also considered the classification review of posts in the

Secretariat. This review was undertaken by a consultant in 1998 and circulated to states parties in August 1998. The Director-General intended to implement the review's recommendation's as of 1 January, but the third session of the Conference did not agree on the contents and methodology of this review and decided to delay further consideration until future budget negotiations. The Director-General informed the fifteenth session of the Council that 106 staff members had written to him formally requesting him to implement the recommendations of the review. He also reported that staff members not satisfied with his response could take the matter to the OPCW's internal Appeals Council and then to the Administrative Tribunal of the International Labour Organization. According to the Director-General this would affect the OPCW's public image and also could be extremely costly. A review of the initial classification exercise was presented to the fifteenth session of the Council which decided to convene informal consultations before the fifth meeting of the Council. The meeting was unable to reach a decision and decided to convene further consultations with a view to making a recommendation to the fourth session of the Conference for the possible implementation of another classification review and its related methodology and scope. The classification review will also be considered by the sixth meeting of the Council.

Other issues As is his right in accordance with Rule 58 of the Council's rules of procedure, the Director-General submitted to the fifteenth session a proposal to amend paragraphs 12 and 14 of the rules. Paragraph 12 of the rules of procedure deals with the calling of emergency sessions of the Council. The proposed amendment would allow the Council chairman, any Council member or the Director-General to request that the Council meets within 24 hours to consider any other emergency situation likely to have a serious effect on the interests of the OPCW. The Council considered the proposal and decided to return to it at its sixteenth session.

The fifteenth session of the Council considered the draft privileges and immunities agreement with South Korea and recommended that it be approved by the fourth session of the Conference. The Director-General reminded other states parties of their obligation to negotiate such agreements with the Secretariat under Article VIII.50, to date the Conference has only approved two agreements. This is particularly important for those states parties whose laboratories have been designated for the analysis of authentic samples.

As reported in the previous quarterly review the Validation Group at its third meeting requested the Director-General to submit to the Council a revised version of the certification procedure for the Central Analytical Database and on-site databases. This revision to the procedure adopted by the first session of the Conference was submitted to the fifteenth session of the Council which referred it to the fourth session of the Conference for consideration and adoption. The Council also considered the list of new validated spectra which the third meeting of the Validation Group had forwarded to the Director-General. In accordance with the mechanism for updating the database adopted by the second session of the Conference, the fifteenth session of the Council approved the list of spectra.

As requested by the third session of the Conference, the Council continued its consideration of the list of new inspection equipment submitted by the Secretariat. Informal consultations were held on 12 March and the Secretariat submitted to the fifteenth session of the Council a revised list reflecting the discussions during those consultations. A number of Council members submitted a joint proposal on the establishment of procedures for the procurement of inspection equipment and revised specifications for approved inspection equipment. The Council was unable to reach a final decision and the issue was considered further at the fifth meeting, which was however, also unable to reach consensus. The Council therefore decided to continue informal consultations as intensely as possible, with a view to reaching agreement before the fourth session of the Conference. The issue will be considered by the sixth meeting of the Council on 23 June.

Action by Member States

Ratifications During the period under review four additional states deposited instruments of ratification or accession with the UN Secretary-General in New York. They were: the Holy See which ratified on 12 May (entry into force on 11 June); Nigeria which ratified on 20 May (entry into force on 19 June); Sudan which acceded on 24 May (entry into force on 23 June); and Estonia which ratified on 26 May (entry into force on 25 June). These ratifications and accessions bring the total number of states parties to 125 and the number of signatory states to 45.

Assisting destruction of chemical weapons On 31 May OPCW delegates meet in The Hague to be briefed on the forthcoming international conference on the assistance in the destruction of chemical weapons in Russia. The conference is to be held in Moscow on 15 June and is intended as a follow-up to the conference held last year on 18 May in The Hague. During the preparatory meeting the conference organisers and experts from the Russian ministries of economics and defence briefed delegates on the conference agenda and on the status of the Russian chemical weapons destruction programme and the demilitarisation of CWPFs. The conference in Moscow will be supported financially by the European Union.

Technical Secretariat

Declaration processing As of 29 April the following facilities had been declared to the OPCW: 60 CWPFs in 9 states parties; 32 CWSFs in 4 states parties; 33 CWDFs in 4 states parties; 54 old/abandoned chemical weapons sites in 8 states parties; 24 Schedule 1 facilities in 19 states parties; 315 Schedule 2 plant sites (of which 123 were inspectable) in 24 states parties; 392 Schedule 3 plant sites (of which 329 were inspectable) in 27 states parties; and 3,542 other chemical production facilities (of which 3,349 had been assessed as inspectable) in 47 states parties.

Inspections As of 29 April the Secretariat had carried out 460 inspections at 276 sites in 29 states parties. The breakdown of these inspections was as follows: 110 to CWPFs; 65 to CWSFs; 101 to CWDFs; 47 to Schedule 1

facilities; 93 to Schedule 2 plant sites; 15 to Schedule 3 plant sites; 9 to abandoned chemical weapons sites; and 20 to old chemical weapons sites. OPCW inspectors had spent a total of 29,024 person-days on missions.

Implementation of Article X Part II of the SIR submitted to the fifteenth session of the Council detailed the implementation of Articles X and XI between 15 November 1998 and 15 March 1999. According to Article X.4 states parties are required to annually submit to the Secretariat information on their national protective programmes. As reported in previous quarterly reviews states parties have been unable to reach consensus on what information should be submitted and the issue remains unresolved. Despite this the Director-General stated that states parties are still obliged to submit information and that the failure to submit information is contrary to the CWC's aim of increasing transparency in this area. However, as of 15 March only 10 states parties had submitted the required information (Albania, Belarus, Canada, Czech Republic, France, Lithuania, Romania, Sweden, Switzerland and the UK) and of them only three had submitted information annually as required by Article X.4 (Belarus, Czech Republic and France).

The Secretariat has initiated a training programme for investigations of alleged use (IAU) and the provision of assistance. Following planning and preparation activities an internal seminar was held on 12 March for inspectors and headquarters staff. During 22–23 March a number of the qualified experts nominated by states parties to serve in IAU inspections teams attended a seminar in The Hague to familiarise themselves with the OPCW and to allow the OPCW to better understand their qualifications and fields of expertise. During 19–24 April selected qualified experts joined OPCW inspectors for a field training exercise in the Czech Republic. A full IAU exercise involving qualified experts and inspectors is scheduled for October this year, again in the Czech Republic. There are three scenarios for IAU under the Convention: upon the request of the UN Secretary-General in accordance with Part XI.27 of the Verification Annex; under the provisions for a challenge inspection laid down in Article IX; or in the course of providing assistance in accordance with Article X.9.

During the period under review the Secretariat hosted, in cooperation with a number of states parties, events related to assistance and protection against chemical weapons. As a continuation of its contribution under Article X, the Swiss government hosted the second chief instructor training programme (CITPRO II) in Spiez during 25–30 April. The course gathered together 40 candidates from 33 states parties, particularly those which lack civilian chemical weapons protection capabilities. During 15–20 May in Tehran the Iranian government, as a part of its offer under Article X, held the first course on medical defence against chemical weapons. Further activities are planned for later in the year including a civil defence training course in Lazne Bohdanec, Czech Republic during 9–13 August. As with the previous courses, this course is also a part of the host country's contribution under Article X.

States parties continue to submit contributions and declarations under Article X.7. As of 15 March, 22 states parties (Belgium, Canada, Chile, Denmark, Finland, Hungary, Ireland, Italy, Japan, Kenya, Luxembourg, Mauritius, Neth-

erlands, New Zealand, Norway, Oman, Peru, South Korea, Slovenia, Sweden, Switzerland and Turkey) had made a contribution to the Voluntary Fund for Assistance under Article X.7(a). The total amount in the fund stood at NLG 1,053,642.23. At the same date four states parties (Iran, Philippines, Poland and Spain) had indicated their intention to consider concluding bilateral agreements with the OPCW under Article X.7(b), but no agreements had been signed. A total of 22 states parties (Australia, Austria, Bulgaria, Cuba, Czech Republic, France, Germany, India, Iran, Mongolia, Pakistan, Poland, Romania, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, UK and USA) had made unilateral offers of assistance under Article X.7(c).

Implementation of Article XI Three main programmes make up the Secretariat's implementation of Article XI. Under the first the Secretariat provides support to national authorities in the form of training courses and the declaration support programme. A basic course for personnel of national authorities was held in Ypenburg, the Netherlands during 7–15 June. The declaration support programme is comprised of the network of experts mentioned in previous quarterly reviews and also involves regional implementation workshops. One such workshop was held in Punta Arenas, Chile from 31 May to 4 June for the Latin American and Caribbean region. In order to facilitate regional cooperation and the exchange of information between national authorities the Secretariat has arranged the first annual meeting of national authorities which will take place in The Hague on 26–27 June, the weekend before the fourth session of the Conference begins. From 25 October to 2 November two parallel regional national authority courses will be held in Romania.

The second strand aims to facilitate the building of national capabilities relevant to the implementation of the Convention. In this vein the Secretariat is cooperating in a thematic workshop organised by the United Nations Institute for Training and Research (UNITAR), the Inter-Organisation Programme for the Sound Management of Chemicals (IOMC) and the Intergovernmental Forum on Chemical Safety (IFCS). The workshop will focus on developing and strengthening national legislation and policies for the sound management of chemicals and will be held in Geneva during 22–25 June.

The third strand of the Article XI programmes is intended to facilitate the exchange of chemicals, equipment and scientific and technical information for purposes not prohibited by the Convention. One concrete way in which this is achieved is through the sponsoring of participation in international conferences by scientists and engineers from developing countries. The OPCW has also been able to sponsor three internships during the period under review. These internships are designed to establish links and joint research programmes between research groups in developing and industrialised countries. The Secretariat has also facilitated two transfers of chemical equipment through the chemical technology transfer pages of its website.

Analytical support The Validation Group held its fourth meeting on 21–22 April to discuss the evaluation of new analytical data for possible inclusion in the Central Analytical

Database, and also to consider matters related to the database. The group finalised the evaluation of the data previously made available to it and forwarded the approved data to the Director-General for him to submit to the next session of the Council. The evaluation of analytical data submitted after the group's fourth meeting should be completed by its fifth meeting, scheduled for 5–6 October.

Official visits The, Secretary of State in the Ministry of Foreign Relations of Mexico, Mrs Carmen Moreno Toscano, visited the OPCW headquarters on 12 May. On 17 May the UN Secretary-General, Kofi Annan, paid an official visit to the OPCW headquarters. On 17–18 May Ambassador Tibor Toth, chairman of the Ad Hoc Group of states parties to the Biological Weapons Convention, also paid an official visit to the OPCW headquarters. The OPCW was also visited by officials from the IAEA and CTBTO on working visits during the period under review.

Outreach activities The Secretariat continues to arrange regional seminars aimed at increasing the universality of the Convention and enhancing its effective implementation by states parties. The first seminar of 1999 took place in Paramaribo, Suriname during 24–26 March for the Latin American and Caribbean region. The seminar was attended by representatives of 15 states parties, 6 signatory states, 1 non-signatory state and 1 non-governmental organization. Another, for the eastern European region, was held in Ig, Slovenia on 20–23 April. It was attended by representatives of 16 states parties and 1 non-governmental organization. A third was held in Malta on 2–4 June for countries surrounding the Mediterranean. This seminar was attended by representatives of 11 states parties and 3 signatory states. As part of its participation support project the Secretariat arranged a workshop in The Hague for representatives of delegations based in Brussels and Bonn on 6 May.

The Secretariat has also arranged the first meeting of chemical industry representatives to take place in conjunction with the aforementioned first annual meeting of national authorities during 26–27 June. The meeting will provide representatives of chemical industries with the opportunity to share their experiences of CWC implementation with each other and the OPCW and to be more thoroughly informed about developments in the OPCW.

Staffing As of 19 May, 477 of the allotted 496 fixed term posts within the Secretariat were occupied. Of these, 324 were in the professional and higher category and 153 were in the general service category. Including staff on short term and temporary assistance contracts the total number was around 525. Staff members in the professional and higher categories represent 64 nationalities, with the following regional breakdown: Africa eight per cent; Asia 25 per cent; Eastern Europe 22 per cent; Latin America and the Caribbean 12 per cent; and WEOG 33 per cent.

As already mentioned the staff regulations and tenure policy for staff members of the Secretariat have not yet been finalised. Staff are currently employed on the basis of the interim staff regulations which were approved by the first session of the Conference in 1997 and which should have been replaced by the time of the third session of the Conference last year. Staff resignations in the first few months of

1999 have equalled those for the whole of 1998. Many staff have contracts which expire in May 2000 and with less than a year to go they are still uncertain of their future position with the OPCW. The Director-General has raised the problems of staff turnover and morale in statements to the Council and has urged member states to come to a speedy agreement on the staff regulations. The Director-General also reported to the fifteenth session of the Council that there were only 44 women (13 per cent) in the professional and higher categories and that he encouraged suitably qualified women to apply for professional post in the OPCW.

Subsidiary bodies

Scientific Advisory Board The Scientific Advisory Board (SAB) held its second meeting during 21–23 April. Of the two reports which the SAB considered, the first dealt with the reporting of ricin production and had been drafted by the Temporary Working Group (TWG) on ricin which met on 22–23 March under the chairmanship of Dr Thomas Inch (UK). On the basis of the report the SAB reported to the Director-General that ricin was correctly placed on Schedule 1 and that castor oil plants should not be subject to the Convention's reporting procedures as ricin is destroyed, not isolated. The Director-General accepted these conclusions and recommended that the fourth session of the Conference endorse them.

The second report considered by the SAB dealt with the meaning of the term "production by synthesis" which is used in Part IX of the Verification Annex. The issue was referred to the SAB by the third session of the Conference. The establishment of a TWG was not requested as it was considered that adequate scientific and technical expertise was available in the SAB itself. The report endorsed by the SAB declares that, from a scientific standpoint, it is no longer possible to make any clear distinction between "chemical" and "biological and biologically mediated" processes and that attention should be focused on the product rather than the process. The SAB predicted that this approach would have little effect on current declarations or inspections, even after DOC inspections are initiated, but also stated that it would be prudent to keep the situation under review. The Director-General reported this conclusion to states parties and invited the Council to take up the issue at its sixteenth session with a view to preparing a recommendation to the fifth session of the Conference.

The SAB also replied to a request from the Director-General for its advice on whether the provisions of the Convention apply to the salts of scheduled chemicals even if they are not listed in the Schedules. The majority of SAB members concluded that there should be no differentiation between the treatment of a free base and the corresponding salt, a position which has long been accepted in relation to the control of narcotic drugs. The Director-General concurred with that conclusion and asked the fourth session of the Conference to endorse it and recommend it to states parties for implementation.

The SAB also began work on a number of other issues. The chairman of the TWG on chemical weapons destruction, Prof Giorgio Modena (Italy), briefed the SAB on progress within the group. The SAB agreed that the OPCW should become the main repository on destruction technol-

ogies and that the Secretariat should support the creation of a database on such technologies. The SAB also discussed analytical issues and heard that analytical chemistry had not been used to the extent initially foreseen and probably would not be in the future either. On 24–25 May the Secretariat hosted a technical seminar which was attended by the TWG on analytical procedures which is chaired by Dr Marjatta Rautio (Finland). The SAB recommended to the Director-General a work programme for its TWG on equipment issues, which is chaired by Prof Gerhard Matz (Germany). The SAB also had an initial discussion of the request by the Director-General to address the technical criteria to be taken into account by states parties when declaring holdings of adamsite. The SAB recommended that a TWG be established and that a technical seminar be convened to study the issue.

The SAB will meet for its third session during 15–18 November.

Confidentiality Commission The Confidentiality Commission held its third meeting on 18–20 May. With no actual disputes relating to confidentiality to discuss, the Commission spent its time considering its operating procedures and hearing presentations from OPCW staff members and from the IAEA on its confidentiality regime. The new members of the Commission, elected by the third session of the Conference, took office on 23 May. They attended part of the Commission's third meeting in order to elect a chairman and vice-chairmen for the period 1999–2000. Mr Valery Zyablov (Belarus) was elected as chairman, with Mr David William Chikaka (Zimbabwe) from the African group, Prof Masahiko Asada (Japan) from the Asian group, Mr Jesús María Cuevillas Domínguez (Cuba) for the Latin American and Caribbean group, and Dr Ignacio Vignote (Spain) for WEOG as vice-chairmen. The Commission agreed to hold its next annual meeting at a reasonable time prior to the fifth session of the Conference.

Future work

Unresolved issues Informal consultations on a number of issues which were left unresolved by the PrepCom have been held during the period under review. The facilitators appointed by the Committee of the Whole have been encouraged to work towards resolution of their issues and submit draft decisions to the fourth session of the Conference. Draft decisions on simulation equipment, challenge inspection notification timing, the definition of a CWPF and low concentration guidelines have been prepared for submission. The fourth session of the Conference will also have to decide whether to continue with the present procedure for addressing the unresolved issues or to adopt a different approach for the fourth intersessional period.

Preparations for the fourth session of the Conference

The fourth session of the Conference is only a matter of weeks away and attention is now focused on achieving consensus on the 2000 budget. The Council will meet for its sixth session on 23 June specifically to resolve issues for submission to the Conference. Besides the budget, a number of other issues are on the agenda of the sixth meeting, including the staff regulations, the list of approved inspection equipment, the attribution of costs related to inspections of OCW, the Russian conversion request for a Volgograd CWPF and the requirements for reporting information to the Council on verification activities. The Conference will also have to decide whether to begin inspections to DOC plant sites and also agree upon the modalities for such inspections, for which a number of reports need to be prepared by the Secretariat. The provisional agenda of the fourth session of the Conference was approved by the fifteenth session of the Council.

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

Strengthening the Biological and Toxin Weapons Convention

A two week meeting, the fourteenth session, of the Ad Hoc Group to consider a legally binding instrument to strengthen the Biological and Toxin Weapons Convention (BWC) was held in Geneva from Monday 29 March to Friday 9 April. As in the previous sessions, negotiations focused on the rolling text of the Protocol.

Fifty-seven states parties and four signatory states participated at the fourteenth session; eight fewer state parties than in January as two (Lebanon and Mongolia) participated in March/April whilst ten (Bosnia-Herzegovina, Colombia, Ecuador, Jordan, Kenya, Libya, Mauritius, Nigeria, Oman, and Venezuela) which had participated in January did not in March/April. One fewer signatory state participated in January as Syria participated whilst Gabon and Nepal did not. This reduced participation probably re-

flected the shorter duration of the meeting which was further reduced from two weeks by three public holidays reducing the number of meetings from the usual 20 to 14.

Thirteen new working papers (WP.353 to WP.365) were presented in March/April. As usual these were presented both by states parties (Japan 2, South Africa 2, United Kingdom 2 along with single papers by 3 states and 2 papers by 2 states) and by the Friends of the Chair (2).

Further progress was made in the area of declaration clarification procedures and in Article VII addressing technical cooperation. A new rolling text was produced and attached to the procedural report of the April meeting (BWC/AD HOC GROUP/45, 14 April). This was thus the eighth version of the rolling text – previous versions having been produced in June 1997 (35), July 1997 (36), October

1997 (38), February 1998 (39), June/July 1998 (41), September/October 1998 (43) and January 1999 (44). Although this was again slightly longer (315 pages) than the January version (with previous versions having totalled 113, 167, 241, 241, 251, 278 and 312 pages), there was further progress. Annex IV to the April report again contains papers prepared by the Friends of the Chair of proposals for further consideration in which text modified in a transparent way (~~striking through~~ showing deletions and **bold** proposed new text) is provided. Such text is helpful as it enables delegations to consider both the current rolling text and possible developments thereof.

Of the 14 meetings held, 5 1/3 were devoted to compliance measures, 4 to the investigations Annex, 3 to Article X measures, 5/6 to preamble, 1/3 to seat of the organization and the remaining 1/2 meeting to the AHG. 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 20 *Visits: An Essential Portfolio* and No 21 *Outbreaks of Disease: Current Official Reporting*. (Copies of these together with their Executive Summaries are available on the Bradford website www.brad.ac.uk/acad/sbtwc). In addition, two Quaker lunches were again hosted within the Palais des Nations to discuss key issues relating to visits and why a portfolio of such visits are essential for the future Protocol.

Political Developments

The last week of the March/April AHG session saw a formal statement to the AHG by the Permanent Representative of the Netherlands to the Conference on Disarmament which, on behalf of the Foreign Minister, Jozias van Aartsen, formally announced the candidature of the Hague for the seat of the future BWC Organization. In his statement, he said that:

the presence of the OPCW, as well as a range of other international organizations like the International Court of Justice, the Permanent Court of Arbitration and in the near future the International Criminal Court, makes The Hague a logical choice for the seat of the organization.

He went on to say that the Netherlands was developing their bid and:

Of course, we will take the OPCW experience to heart in our preparations in order to come with an attractive and convincing offer.

In mentioning that several options are under consideration, he said that:

one of the options is an existing and very suitable building in the immediate vicinity of the OPCW.

The Emerging Regime

The distribution of the meetings in the March/April session shows that virtually all the time available was spent on compliance measures, the investigations Annex, and on Article X measures.

Compliance Measures The March/April session focused on visits and made some progress in respect of the language in *Article III. D. Declarations II. Follow-up after Submission of Declarations [B. [Declaration Clarification Procedures][and Voluntary Visit]]*. The alternative language coming from WP.347 and from WP.338 which had been incorporated as alternatives in the January rolling text was discussed and consolidated into a single text. Additional language from WP.358 was added, without discussion, as a proposed replacement for paragraphs 64 to 71 in the section on *Voluntary Visit*. In addition, a further reading was given to the text in Section E *Consultation, Clarification and Cooperation*.

Insofar as [*B. [Declaration Clarification Procedures][and Voluntary Visit]*] is concerned, the current draft Protocol makes provision for the Technical Secretariat either at the request of a state party or as a result of its own examination, if it considers there is an:

ambiguity, uncertainty, anomaly or omission concerning any declared facility [or activity] of a State Party [or identifies any facility which it believes meets the criteria for declaration...and that facility has not been included in the declaration(s) concerned]

to submit a written request for clarification to the state party concerned. This shall be provided in writing no later than 20 days after receipt of the request. If within 14 days after receipt of the written response either the state party making the original request or the Technical Secretariat considers that the response does not resolve the matter, the Technical Secretariat may submit a written request to the state party concerned for a consultative meeting between the Technical Secretariat and representatives of the state party in order to resolve the matter. Such a meeting shall begin:

no later than [10] days after receipt of the request for such a meeting and its duration shall not exceed 48 hours.

Should the consultative meeting not resolve the matter then the Technical Secretariat may propose that a clarification visit be conducted at the facility concerned. The requested state party shall:

no later than [48][72] hours after receipt of the request for a clarification visit

inform the Director-General whether the visit should proceed as proposed, the proposal for the clarification visit should be submitted to the Executive Council for review:

at [its next regular][a special] session

or the clarification visit be declined:

if the requested State Party considers that it has made every reasonable effort to resolve the matter

through these procedures. In the last case, the Executive Council shall be so informed by the Director-General:

within [12] hours of receipt of the requested State Party's response.

In addition, the language also makes provision for the requested state party, at its own discretion and at any stage during the clarification procedures, to invite the Technical Secretariat to make a voluntary visit with a view to resolving the matter which has been raised.

The section on *Voluntary Visits* now contains additional alternative language taken from UK WP.358. A conference room strikethrough text paper by the FOC suggests how the several different texts that occur in the rolling text and WP.358 might be merged. Unfortunately, this paper has not been incorporated into the Annex IV text.

Annex B Visits was not discussed during the March/April meeting; a South African working paper (WP.360) provided suggested text for part of Annex B. A working paper by Iran, WP.361, noted that over 400 routine inspections for verifying the accuracy of the submitted declarations have been carried out by the OPCW since the entry into force of the CWC and that this experience could help the AHG negotiators to “concentrate on objective perceptions, particularly on visit and investigation procedures”. It proposes that the Director-General of the OPCW should be invited to brief the AHG on “their assessment of the realities that we should consider in our endeavour to conclude an effective and feasible Protocol for the BWC”.

Annex IV in Part II contains in FOC/14 and FOC/17 a strikethrough text version for Article III D Declarations which provides language for *I. Submission of Declarations, II. Follow-up after Submission of Declarations* — which includes transparency and clarification visits but not voluntary assistance visits — and for the whole of Article III G Investigations.

Annex D on Investigations Further progress was made on the Investigations Annex. The *II. [Field] Investigations [of Alleged Use of BW]* section was developed with good progress made in removing square brackets and streamlining the text. The language on sampling and identification has been developed to include the requirement for the Director-General to “establish a stringent regime governing the collection, handling, storage, transport and analysis of samples” and to “select from among the designated and certified laboratories those which shall permit analytical or other functions in regard to the investigation”. It is also clear that duplicate sealed samples are to be maintained in case further clarification is necessary. Following a UK working paper WP.357, language is now included for the establishment of additional investigation area(s) to those originally specified in order to fulfil its mandate.

Annex IV in Part II provides strikethrough text for *III [Facility] Investigations [of Any Other Alleged Breach of Obligations under the Provisions of the Convention]*.

Definitions Although there were no meetings on Definitions during the March/April meeting, strikethrough text prepared by the FOC is provided in Annex IV for *Article II Definitions* and for *Annex A II. List of Equipment*.

BWC Article X Measures Particular progress was made on Article VII of the Protocol at the March/April meeting. A Netherlands/New Zealand working paper WP.362 addressed measures related to Article X of the Convention and offered several options for consideration in the AHG negotiations:

- A. Assistance in the establishment of national implementation legislation measures
- B. Training for BWC Organization National Authorities

- C. Technical cooperation and assistance in the context of visits
- D. Electronic communications network
- E. Biotechnology database
- F. Regional industry seminars
- G. Training and development in biotechnology
- H. Disease surveillance networks
- I. Article X cooperation committee
- J. Reporting

It then identified criteria for evaluating the various options and provided a tabular evaluation. The criteria used were:

- Contribution to other objectives of the Protocol
- Promotion of Protocol universality
- Synergies with other international organizations implementing assistance and cooperation in the field of biotechnology
- Acceptability
- Cost-effectiveness

WP.362 was well received and appears to have helped the negotiations on Article VII of the Protocol to move forward. Another working paper, by Australia and the UK, WP.363 made proposals for amendments and additions to the draft Protocol text for Article VII.

The revised Article VII text emerging from the March/April session is considerably developed in *(C) Measures to Avoid Hampering the Economic and Technological Development of States Parties*, and in *(D) Institutional Mechanisms for International Cooperation and Protocol Implementation Assistance [and its Review]*. Section *(D) Institutional Mechanisms for International Cooperation and Protocol Implementation Assistance [and its Review]* was effectively doubled in size from just over two pages to just over four pages; its title emerged from being within square brackets and it is now structured with subsections on *The Cooperation Committee, Role of the Technical [Secretariat][Body], Protocol implementation assistance and Other assistance*. Language proposed in WP.363 was incorporated into Sections (E) and (F) for discussion at a later meeting.

There was a real sense that the negotiators had become engaged in Article VII and made real progress.

In addition, the Friend of the Chair in a paper (FOC/18) in Annex IV in Part II provided, for the first time, strikethrough text suggesting how Article VII text might be developed.

Organization/Implementational Aspects There was no discussion of Article IX although the strikethrough text in Annex IV produced by the Chairman for further consideration of Article IX was amended in section E on privileges and immunities.

Seat of Organization The Friend of the Chair had one-third of a meeting on the Seat of the Organization. As already noted above, the Netherlands made a formal proposal that The Hague should be the seat of the BWC Organization. The Friend of the Chair prepared a working paper, WP.365, which provided a draft questionnaire for the seat of the Organization. This was also reproduced as FOC/16 in Annex IV in Part II. It contains a number of questions which include the *Price of a Big Mac* and *How many*

INTERNET providers are available? And at what cost? Delegations have been requested to comment on the draft questionnaire with the intention of producing a revised version for the June/July session.

Preamble The Friend of the Chair had five/sixths of a meeting on the Preamble. A working paper (WP.364) by Australia proposed replacement language for the Preamble. The text in the draft protocol from the March/April session comprised a merged and streamlined version of the previous language together with the language from WP.364 following a preliminary discussion thereon.

Prospects

The March/April meeting also saw the agreement of the programme of work for the four week fifteenth session to be held from 28 June to 23 July. The 40 meetings were allocated as follows:

Compliance measures	13.17
Investigations annex	4
Article X	8
Definitions	9.67
Confidentiality	1
Ad Hoc Group	0.83
Preamble	0.67
Legal issues	0.67
National Implementation	0.67
Organization	0.67
<u>Seat</u>	<u>0.3</u>
Total	40

Overall, the March/April meeting saw further progress in the areas of the draft Protocol addressed in the meeting with particular progress being made in Article VII. It is useful to take stock of the overall situation in respect of the draft Protocol.

In most areas of the Protocol, 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 which is making steady although slow progress. An overall appreciation of the current state of progress of the Protocol is summarised in Table 1.

The overall assessment that emerges is that in a number of areas such as legal issues, confidentiality, organization, national implementation, assistance and Annex D Investigations the text for the Protocol is well developed. There are three principal areas — Article III Compliance Measures (and its associated Annexes and Appendices), Article VII Technical Cooperation and Article II [Definitions] — where more work remains to be done. Article III Compliance Measures (and its Annexes and Appendices) comprises well over 100 pages of the draft Protocol and thus much the largest task faced by any of the FOCs. Article VII has started to make progress in January and again in April with the recognition that measures to implement Article X of the Convention also contribute to strengthening confidence in compliance. 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. There is much to be said for the AHG in the area of definitions focusing first and foremost on the definitions **needed** to ensure that

Table 1. Progress of the ‘Rolling Text’, as of April 1999

Article	Pages		Last amended
Preamble	5		Revised April 1999
I General Provisions	0	No text	
II [Definitions]	11		Revised January 1999
III Compliance Measures	71		III D II Declaration Clarification Procedures revised April 1999
IV Confidentiality Provisions	3	40 pairs []	Revised January 1999
V Measures to redress a situation	1	6 pairs []	Revised January 1999
VI Assistance	3	31 pairs []	Revised January 1999
VII Technical Cooperation	13		Revised April 1999
VII CBMs	0	No text	
IX The Organization	16		Revised January 1999
X National Implementation	1	10 pairs []	Revised January 1999
XI - XXIII (Legal Issues)	14	48 pairs []	Largely agreed. Some revised January 1999
Annex A Declarations	22		
Annex B Visits	31		
Annex C Article III measures	0	No text	
Annex D Investigations	38		Largely agreed. Some revised April 1999 No text for Art III investigations
Annex E Confidentiality	10		Largely agreed. Revised January 1999
Annex F Technical cooperation	0	No text	
Annex G CBMs	17		Unchanged since January 1998
Appendices A to F	49		A to D concerned with declaration formats

the measures such as declarations in the Protocol are unambiguous and hence that the information provided to the future BWC Organization is comparable.

The impetus to complete the Protocol within the coming year received further momentum on 17 May when the EU adopted a further common position

to promote the conclusion of the negotiations...on a legally binding protocol establishing a verification and compliance regime that will effectively strengthen the BTWC Convention. In order to achieve this, it is imperative to complete all the stages necessary for the adoption of the Protocol by a special conference of States Parties in 2000.

It then sets out the following measures as being:

both central to, and essential for, an effective Protocol ...

- 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 ensure 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. ... 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.

The clear commitment to all of these measures including specific measures to promote international cooperation and exchanges in the field of biotechnology is welcomed.

The achievement of an agreed Protocol requires progress both at the technical level on the text of the Protocol and at the political level between the States Parties engaged in the AHG negotiations. As shown above, technical progress is well advanced on most Articles of the Protocol. It is encouraging that at the political level there are ongoing discussions on a bilateral, regional and global basis on a variety of political initiatives which over the coming year would reinforce the political will to complete the Protocol. There are a number of regional and global meetings at which the importance of the early completion of the Protocol could be reaffirmed. Furthermore, the coming year will see the 75th anniversary of the Geneva Protocol of 1925 which would provide another suitable forum for enhancing the political impetus.

There is little doubt that at both the technical and political levels an effective Protocol can be achieved. Additional efforts to this end need to be made throughout the coming year.

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

News Chronology

February through May 1999

What follows is taken from the Harvard Sussex Program CBW Events Database which provides a fuller chronology and identification of sources, all of which are held in hard copy in the Sussex Harvard Information Bank. The intervals covered in successive Bulletins have a one-month overlap to accommodate late-received information. For access to the Database, apply to its compiler, Julian Perry Robinson.

1 February Iraq is preparing to carry out air strikes on "military or economic targets in Saudi Arabia in particular", according to an unidentified "source within the Iraqi opposition" quoted in the Jordanian newspaper *Al-Arab al-Yawm*, which also states that the preparations involve more than 15 Mirage and MiG-15 aircraft. That reference to a long-obsolete type of aircraft gives rise to speculation that Iraq may have developed MiG-15s into unmanned aerial delivery vehicles for biological-warfare agents, similar to the UAVs developed by Iraq from L-29 aircraft that were destroyed by US and British air strikes in December [see 18 Jan]. The unidentified source is quoted as specifying US forces at Prince Sultan airbase in al-Kharj as a likely target for the attack, which is said to be conceived as retaliation for the

recent US attack on five Iraqi missile batteries in the Basra region. {*Defence Systems Daily* 4 Feb}

1 February In the South African Parliament, the Public Accounts Committee announces that it will be investigating possible discrepancies in the evidence on the apartheid government's CBW programmes which the SA National Defence Force had presented to it [see 21 Aug 96] and to the Truth and Reconciliation Commission [see 29 Oct 98] {*Johannesburg Business Day* 2 Feb}.

1 February In Washington, lawyers acting for Saleh Idris, the Saudi Arabian businessman whose pharmaceutical plant in

Sudan had been destroyed five months previously by US cruise missiles [see 2 Dec 98], meet with staff members of the House of Representatives Permanent Select Committee on Intelligence in order to rebut repeated claims by the administration that Idris is linked to Osama bin Laden [see 22 Dec 98] and that the Al-Shifa plant had been associated with production of VX nerve gas. Mr Idris is seeking compensation from the United States and the release of \$23 million in frozen assets. {*Washington Post* 4 Feb} The lawyers, it later transpires, now have reports from the detailed investigations they had commissioned, one from Kroll Associates of New York [see 2 Jul 98], which found no evidence of that link between Idris and bin Laden, and another by Dames & Moore of Manchester in conjunction with three European laboratories under the overall direction of Dr Thomas Tullius, chair of Boston University Chemistry Department, which failed to find either the VX-precursor EMPTA, or its degradation product EMPA, in 21 controlled samples taken from 13 locations at the site of the Al-Shifa factory {*New York Times* 9 Feb, *London Independent* 15 Feb, *Chemical & Engineering News* 15 and 22 Feb}. ABC News later reports that the US Defense Intelligence Agency had conducted its own review and had concluded that the decision to bomb the factory had been based on "bad intelligence and ... bad science" {*Reuter* from Washington 10 Feb}. Subsequently, on 26 February, civil suit is filed against the US government by Mr Idris for release of his deposits at the Bank of America, frozen because US officials believed him to be involved in terrorism {*AP* from Washington 3 May}.

1 February President Clinton submits his budget for Fiscal Year 2000 to Congress. The substantially increased defense spending envisaged in the budget is, among other things, to prepare for what Defense Secretary William Cohen describes to reporters as future "New Age" threats, such as simultaneous chembio attacks on multiple US cities. {*USIS Washington File* 1 Feb} The budget request includes \$1.38 billion for domestic preparedness against weapons of mass destruction [see also 22 Jan] — \$611 million for training and equipping first-responders and other emergency personnel in the larger US cities, \$52 million to continue the procurement of a national stockpile of vaccines, antibiotics and therapeutic drugs to protect the civil population, \$206 million for protection of federal government facilities, and \$381 million for research and development in new therapies, vaccines, diagnosis, agent detection and decontamination, and the disposition of nuclear material. Speaking of the increased spending here projected for new vaccines and medicines and for public health surveillance, Health and Human Services Secretary Donna Shalala says: "This is the first time in American history in which the public health system has been integrated into the national security system" {*Terrorism & Security Monitor* Jan/Feb, *Aviation Week* 15 Feb}. A \$72 million line-item in the FY00 HHS budget entitled *Responding to the New Threat of Bioterrorism* provides for expanded research on chemical and biological agents, improved surveillance and support for local medical response systems {*HHS News* 8 Mar}. For Defense Department research and development programmes for countering chembio terrorism, \$166 million is sought in the budget. Related Energy Department research and development on detectors, forensics, pathogen gene-sequencing, decontamination, modelling and systems analysis is budgeted at \$31 million for FY 2000 {*Chemical & Engineering News* 8 Feb}. The chemdemil budget of the Army is increased from its FY99 level of \$777 million to \$1169 million in FY00 falling to \$986 million in FY01.

2 February In the US Senate Armed Services Committee, the Director of US Central Intelligence, George Tenet, and the Di-

rector of the Defense Intelligence Agency, Lt-Gen Patrick Hughes, testify on current and future threats to national security. Both place emphasis on the likelihood of a continuing proliferation of weapons of mass destruction. Director Tenet says: "Against the backdrop of an increasing missile threat ... the proliferation of chemical and biological weapons takes on more alarming dimensions. At least sixteen states, including those with the missile programs mentioned earlier [North Korea and Iran], currently have active CW programs, and perhaps a dozen are pursuing offensive BW programs. And a number of these programs are run by countries with a history of sponsoring terrorism."

Director Tenet also testifies: "One of my greatest concerns is the serious prospect that Bin Ladin or another terrorist might use chemical or biological weapons. Bin Ladin's organization is just one of about a dozen terrorist groups that have expressed an interest in or have sought chemical, biological, radiological, and nuclear (CBRN) agents. Bin Ladin, for example, has called the acquisition of these weapons a 'religious duty' [see 22 Dec 98] and said that 'how we use them is up to us'."

General Hughes, in his testimony, draws attention to dramatic changes in the nature of future threats that could result from development of technology. He cites biotechnologies as one of several examples, "particularly the bioengineering of organisms created for very specific purposes (e.g. biological agents that will infect and incapacitate a specific group of people)". {*FNS transcripts* 2 Feb}

2 February In Maryland, at Aberdeen Proving Ground, demonstration testing commences of non-incinerative alternative technology for the chemdemil of assembled chemical weapons. Other such demonstrations under the Defense Department ACWA programme [see 29 Jul 98] are shortly to commence in Utah at Deseret Chemical Depot and Dugway Proving Ground. The demonstration testing is scheduled to end in early May. {*ACWA Dialogue Exchange press release* 2 Feb, *Tooele Transcript Bulletin* 18 Feb}

2-5 February In The Hague, the OPCW Executive Council [see 8-11 Dec 98] convenes for its fourteenth regular session. [For details, see *Progress in the Hague* in CBWCB 43]

4 February In Guinea Bissau, presidential spokesman Cipriano Cassama denies accusations made the day previously in Cape Verde by the Bafata Movement that government troops are supported by French mercenaries and have a stock of chemical weapons {*RTP* 4 Feb}.

4 February In New York, the Council on Foreign Relations convenes a breakfast roundtable on *Criminalizing Chemical and Biological Weapons under International Law* at which Professor Matthew Meselson presents for discussion the Harvard Sussex Program draft international convention on the subject. Some 90 people participate, including members of 26 national missions to the United Nations.

4 February At the United Nations Secretariat in New York, Ambassador Richard Butler announces that he will step down as Executive Chairman of UNSCOM when his contract expires at the end of June. In a press interview he rejects the suggestion that he is bowing to Iraqi and Russian demands for his resignation: "If I was forced out, what would that mean for my successor? He would be in the Russians' pocket." {*AFP* from the UN 4 Feb} A prominent Moscow newspaper, the *Kommersant-Daily* {11 Feb}, later reports that, following an agreement between Russia, the United States and UN Secretary-General Kofi Annan, the United States had decided not to insist on the

contract being renewed. The newspaper also says this: "In order to thank Butler for his faithfulness, the US has prepared a new job for him: he will lead the Organization for the Prohibition of Chemical Weapons in the Hague".

4–5 February The US Arms Control and Disarmament Agency and the US Department of Energy cosponsor an international conference in McLean, Virginia, on *Implications of Commercial Satellite Imagery on Arms Control*, organised in conjunction with the Center for Global Security and Cooperation of Science Applications International Corporation (SAIC), which has also prepared a detailed read-ahead paper for the conference and, afterwards, a report on the proceedings. Some 60 people participate, mostly from the US governmental, academic, think-tank and commercial-satellite communities but also from overseas, among them people from international treaty organizations. Using panel presentations, roundtable discussion, and a series of analytic games, the conferees assess how the increasing availability of high-resolution imagery from commercial satellites might affect the monitoring of, and compliance with, such arms agreements as the nuclear-weapons Non-Proliferation Treaty, the Comprehensive Test Ban Treaty, and the CWC. The SAIC report on the conference observes: "The real impact of commercial satellite imagery lies in the expansion of the number of states and non-state actors who will have access for the first time to high resolution satellite imagery. This promises to widen the number of players in the diplomatic game and place more of the game in the public arena. It also threatens to diminish private diplomacy between states, accelerate discussions among players about non-compliance and what should be done about it, and increase the possibility of erroneous decisions as nations move faster to get ahead of, or at least to keep up with, non-state actors. According to some participants, governments are not prepared for these implications of commercial satellite imagery. The sponsors hope that this conference, appropriately followed up, will contribute to greater preparedness in this regard."

5 February In Brownsville, Texas, the two men found guilty in the poisoned cactus-needle trial [see 5 Oct 98] of sending e-mail to government agencies threatening the use of weapons of mass destruction are each sentenced to 24 years in prison {UPI from Brownsville 6 Feb, AP in *Times-Picayune* 7 Feb}.

5 February In The Hague, a report on the US CWC-implementing legislation [see 19 Oct 98] is published in *OPCW Synthesis* {Jan/Feb} by the US representative to the OPCW, Ambassador Ralph Earle II [see 16 Nov 98 US]. He comments on three provisions of the legislation that, as he puts it, "were not ideal": the stipulation that samples collected for CWC purposes in the United States not be taken abroad for analysis (tracking Condition 18 of the Senate ratification resolution [see 25 Apr 98 President Clinton]); the provision which gives the president authority to deny, on grounds of national security, a request under the CWC for the inspection of any facility in the United States; and the setting of the low-concentration threshold for Schedule 3 chemicals at 80 percent. Ambassador Earle says that "truly harmful provisions" might have resulted if the administration had reopened the text of the draft legislation after its passage through the Senate [see 23 May 97]. He says: "We believe these three provisions will not harm the treaty's verification in the United States", but makes no comment on their possible effects elsewhere. He concludes his remarks thus: "Having secured implementing legislation, the US Government is working to collect and prepare industry declarations for submission to the OPCW. The next step is to move ahead on issuing regulations requiring companies to submit declara-

tion information. Once these regulations are issued, we expect that it will take approximately six months to finalize the US industry declaration."

In fact, so *Chemical & Engineering News* {18 Jan} has just reported, those regulations have been delayed by interdepartmental discord in Washington that the White House has not yet moved to resolve. Three months later, the White House has still to release the requisite executive order {*Export Practitioner* Mar, *Chemical & Engineering News* 19 Apr, *Boston Globe* 28 Apr}.

6 February From Sarajevo, TV Bosnia-Herzegovina {BBC-SWB 7 Feb} broadcasts a report about production of chemical weapons by the former Yugoslavia. The report states that the production is still continuing in the Federal Republic of Yugoslavia (Serbia & Montenegro). The report refers to a letter addressed to international organizations by a former officer of the former Yugoslav army that noted "facilities and locations where research was carried out and the production developed, and ... the cooperation between the FRY and Iraq in this sphere". Brigadier (retired) Mujo Alic [see 25 Aug 93 and 19 Nov 98] is then seen saying to camera: "The Yugoslav People's Army had several types of poison gases. They were mostly produced at Miloje Dakic factory, in Krusevac (Serbia) [see 20 Sep 91] — mainly poisons which cause irritation, then at Milan Blagojevic factory in Lucani near Cacak (Serbia) — mainly deadly poisons. Poison gases were also produced in Potoci near Mostar [see 27 Nov 95], which was a branch of the military and technical institute from Belgrade." Next, the reporter says to camera: "One of the institutes of the former Yugoslav army used to be in Livac near Mostar. A chemical weapons factory was also there. There are indications that the production of poison gases, even sarin and soman, had been developed at the factory." Attributing former Yugoslav army sources, the reporter later says: "[P]roduction at the Livac institute met the needs of the centre in Krusevac and the military and technical institute in Belgrade. The institute used to produce several types of poison gases: sarin, soman, tabun, lewisite, CN and yperite, as well as psychochemical poisons, such as VX and CS [sic], in large quantities. Field experiments were carried out at the Krivolak test range [see 12–16 May 97] near Veles in Macedonia. Air bombs and artillery missiles were also filled with the poisons. On 3rd January 1991 [sic], the Livac institute and factory were occupied by a reserve formation of the then army. Two months after that, all the employees were dismissed and the equipment transferred to Krusevac and Lucani near Cacak. The barracks of the Bosnia-Herzegovina Federation Army are today where the factory used to be." The report makes no mention of the CW-agent factory at Baric referred to in a UK documentary on the subject 3 years previously [see 27 Nov 95]

9 February In the UK, the *Independent Review of the Possible Health Hazards of the Large-Scale Release of Bacteria during the Dorset Defence Trials* which, in response to public alarm, the Ministry of Defence had commissioned some six months previously [see 22 May 98] is now published. The review, by Professor Brian Spratt, a microbiologist at Oxford University, concludes that the releases — of live *E coli* and *B globigii*, and of killed *S marcescens* and *K aerogenes* — were very unlikely to have had health consequences for the "overwhelming majority" of individuals that were exposed, although it was conceivable that they could have endangered the inestimable but small number of individuals rendered peculiarly susceptible because of severe immuno-deficiency, for example, or cystic fibrosis. Alluding to concerns that had been expressed within the exposed communities {London *Independent on Sunday* 31 Jan and 14 Feb}, Professor Spratt also concludes:

"None of the bacteria that were released are known to cause miscarriages, chronic ill health, learning disabilities or birth defects. These types of health problem cannot be attributed to the release of bacteria during the Dorset Defence Trials."

The Ministry of Defence announces that there is to be a further independent review, this one of possible health hazards associated with earlier BW trials in which fluorescent particles of zinc cadmium sulphide had been used to simulate BW agent {MoD press release 9 Feb}. Dorset County Council had been calling for such a study [see 23 Nov 98].

9 February The US Director of Central Intelligence has transmitted to the Congress his latest 6-monthly report on the acquisition by foreign countries of dual-use and other technology applicable to weapons of mass destruction, as required under Section 721 of the FY 1997 Intelligence Authorization Act [see 24 Sep 96 US Congress]. Prepared by the DCI Nonproliferation Center and coordinated throughout the US intelligence community, an unclassified version covering the period 1 January through 30 June 1998 is now posted on the internet {www.odci.gov/cia/publications/bian/bian.html}. Much of what it says on chemical and biological matters simply repeats what the previous version had said, but there are some changes.

Thus, the report on Iraq is expended to include the following: "The recent discovery that Iraq had weaponized the advanced nerve agent VX and the convincing evidence that fewer CW munitions were consumed during the Iran-Iraq war than Iraq had declared provide strong indications that Iraq retains a CW capability and intends to reconstitute its pre-Gulf war capability as rapidly as possible once sanctions are lifted." In a similar vein the report also says: "After four years of denials, Iraq admitted to an offensive program resulting in the destruction of Al Hakam — a large BW production facility Iraq was trying to hide as a legitimate biological plant. Iraq still has not accounted for over a hundred BW bombs and over 80 percent of imported growth media — directly related to past and future Iraqi production of thousands of gallons of biological agent."

On Syria, Chinese entities are now explicitly identified as suppliers of CW-related chemicals, and the "more potent" nerve agents it is said to be trying to develop are now said to be "more toxic and persistent" ones.

Sudan is addressed for the first time: "Sudan has been developing the capability to produce chemical weapons for many years. In this pursuit, Sudan obtained help from other countries, principally Iraq. Given its history in developing CW and its close relationship with Iraq, Sudan may be interested in a BW program as well."

On Iran the only novelty is the identification of Russia as a pursued, if not yet actual, vendor of dual-use biotechnical equipment. The report says: "Russia remains a key source of biotechnology for Iran. Russia's world-leading expertise in biological weapons makes it an attractive target for Iranians seeking technical information and training on BW agent production processes."

In a subsequent comment on this last item, Russian Vice Premier Yuriy Maslyukov says to reporters: "Russia possesses an efficient enough system of exports control to prevent leak of ... technologies connected with creation of weapons of mass destruction" {Interfax from Moscow 10 Feb}.

10 February In Japan a senior government official, unidentified, speaks to reporters about the project for destroying the abandoned chemical weapons in China [see 6 Jan]: "Of course we are aiming to finish the project by 2007. But I must say it might be difficult to dispose of all 700,000 dumped shells by 2007 because of the huge number." The official goes on to speak of the possibility of consulting with the Chinese govern-

ment about seeking an extension of the deadline by the five years that are permissible under the Chemical Weapons Convention. {Asahi News Service from Tokyo 12 Feb}

11 February Iraq, in the war of attrition being waged against it by UK and US forces [see 28 Dec 98 and 1 Feb], has thus far experienced some 40 strikes against its air-defence missile and gun sites in the northern and southern no-fly zones {*Aviation Week* 15 Feb, London *Independent on Sunday* 21 Feb}. It warns that it may now attack the bases in Saudi Arabia, Kuwait and Turkey from which the strikes have been launched. In Britain, Parliament is informed as follows by the Defence Secretary: "Coalition patrols of the Northern and Southern no-fly zones in Iraq are in support of UNSCR 688. They are justified under international law on the basis of overwhelming humanitarian necessity. They prevent Saddam Hussein from using his air force against the Iraqi people in the north and south and enable us to monitor the actions of his forces on the ground. In responding to the threat from Iraqi air-defence systems, coalition aircraft have responded in self defence in a proportionate manner. This action is justified under international law on the basis of self defence." {*Hansard (Commons)* written answers 16 Feb}

11 February The US National Academy of Sciences Institute of Medicine releases the second [see 23 Mar 96] of its statutory two-yearly updates of the report which, in accordance with Public Law 102-4, the Agent Orange Act of 1991, it had published in 1994, *Veterans and Agent Orange: Health Effects of Herbicides Used in Vietnam* [see 27 Jul 93] {AP from Washington 12 Feb}. Besides bringing the earlier scientific evidence up to date, the new report addresses five specific areas of interest identified by the Department of Veterans Affairs: (1) the relationship between exposure to herbicides and the subsequent development of diabetes; (2) the issue of the latency between exposure to herbicides and development of adverse health outcomes; (3) the classification of chondrosarcomas of the skull; (4) herbicide exposure assessment for Vietnam veterans; and (5) the potential for using data combination methodologies to re-examine informatively existing data on the health effects of herbicide or dioxin exposure. As to (4), the update observes: "Although definitive data are presently lacking, the available evidence suggests that Vietnam veterans as a group had substantially lower exposure to herbicides and dioxin than did the subjects in many occupational studies. Participants in Operation Ranch Hand [see 1 Nov 98] and members of the Army Chemical Corps are exceptions to this pattern, and it is likely that there are others who served in Vietnam who had exposures comparable in intensity to members of the occupationally exposed cohorts. Although it is currently not possible to identify this heavily exposed fraction of Vietnam veterans, the exposure assessment research effort presently underway may allow progress to be made on this important question." {www.nap.edu/readingroom/books/update98}

12 February At UN headquarters in New York, Ambassador Celso Amorim of Brazil releases the final list of the names he is submitting to the Security Council for membership of the three panels that are to review UN relations with Iraq [see 30 Jan]. For the panel on "disarmament and current and future ongoing monitoring and verification" he names 20 people: Ichiro Akiyama (OPCW, Japan), Jacques Beute (IAEA, France), Kaluba Chitumbo (IAEA, Zambia), Ron Cleminson (Canadian UNSCOM commissioner), Rachel Davies (UNSCOM, UK), Jayantha Dhanapala (UN Under-Secretary-General for Disarmament Affairs, Sri Lanka), Charles Duelfer (UNSCOM Deputy Executive Chairman, USA), Roberto Garcia Moritan (Argen-

tina), Guennady Gatilov (Russian UNSCOM commissioner), Gabriele Kraatz-Wadsack (UNSCOM, Germany), Hideyo Kurata (Japanese UNSCOM commissioner), Liu Jieyi (China), Johan Molander (Swedish UNSCOM commissioner), Jack Ooms (Netherlands UNSCOM commissioner), Daniel Parfait (France), Gianpiero Perrone (Italian UNSCOM commissioner), Horst Reeps (UNSCOM, Germany), Paul Schulte (British UNSCOM commissioner), Tom Shea (IAEA, USA) and Nikita Smidovich (UNSCOM, Russia) {AFP from the UN 12 Feb}. The panel begins its first session, in New York, on 23 February, its recommendations to the Security Council being due by 15 April {London *Financial Times* 24 Feb}.

12 February In Washington DC, federal authorities announce the arrest in Detroit of a Chinese national, Yufeng Wang, on charges of illegal shipment to China in 1995 of a 60-ton riot-control vehicle equipped with a pressurized irritant-chemical dispensing system {DoJ release 12 Feb}.

15 February In Yemen, anthrax attacks against any Westerners remaining in the country are threatened in a message transmitted to a newspaper. Sent from London, the message is signed by "Army of Suicidals Group 66, Bin Laden Militant Wing". {AFP from Sanaa 20 Feb}

16 February In Moscow, the Russian Federal Antiterrorist Commission convenes for its inaugural session. Its chairman, First Deputy Prime Minister Vadim Gustov, subsequently tells reporters that the state should establish control over all places where weapons, including CBW weapons, are stored. {ITAR-TASS from Moscow 16 Feb}

16–17 February In Arlington, Virginia, a national symposium on *Medical and Public Health Response to Bioterrorism* is sponsored by the Center for Civilian Biodefense Studies (recently established by Johns Hopkins University under the direction of Dr D A Henderson [see 20 Nov 98]), the US Department of Health and Human Services, the Infectious Diseases Society of America and the American Society for Microbiology. Its organizers describe the symposium as "an effort to create awareness among health professionals so that they can lend their expertise in developing informed measures against bioterrorism". The description continues: "The symposium brings together medical, public health, government, intelligence, and military experts to consider why current concerns about bioterrorism are real and not inflammatory, why medicine and public health communities must address this issue, which biological threats warrant the most concern, and what the aftermath of an act of biological terrorism could be". A thousand people attend the symposium, listening to some 30 invited speakers and panellists {<http://hopkins-id.edu/bioterror/agenda.html>}. A focus for the proceedings comes from the presentation of two detailed scenarios of bioterrorism, one depicting consequences of an anthrax attack, the other, smallpox {*Journal of the American Medical Association* 24 Mar}. The keynote address is by US Health and Human Services Secretary Donna Shalala {FNS transcript 16 Feb}.

16–26 February In New York the Preparatory Commission for the International Criminal Court [see 24 Nov 98] conducts its first session. The Commission elects Ambassador Philippe Kirsch of Canada to its chair and focuses its discussion on Parts 5, 6 and 8 of the ICC Statute. The Statute, adopted during the Rome Diplomatic Conference [see 17 Jul 98], will come into force once 60 states have ratified their signature of it; 75 states have signed so far and, on 2 February, Senegal became the first to ratify. The Commission is to reconvene for its sec-

ond session during 26 July to 13 August. {UN press release L/2906 12 Feb} The Presidency, now German, of the European Union, all of whose members are signatories, issues a statement pledging that it "will spare no effort", calling for the "widest support" for the Court, and stressing "the important future role of the International Criminal Court both in preventing serious violations of international humanitarian law and serious human rights violations, and in ensuring that those responsible for atrocities are brought to justice" {AP from the UN 17 Feb}.

17 February In Karachi, *Jasarat* reports that, in preparation for the OPCW inspection at Wah Ordnance Factory in two days time, the government has dismantled a chemical plant there and levelled the ground on which it stood. The newspaper also reports: "To keep their mouths shut, the employees have been given a bonus equal to their one-month salaries".

17 February Chechen leaders threaten terrorist acts at Russian CBW facilities if Russia does not free two women accused of terrorism, it is reported by *Kommersant* {17 Feb}.

17 February UK Defence Secretary George Robertson tells the House of Commons Defence Committee that one of the reasons why the UK had opposed the German proposal that NATO should move towards a no-first-use policy on nuclear weapons [see 17 Oct 98] was that such a policy could assist potential aggressors by allowing them to consider a "substantial conventional, or a chemical or biological assault, without any fear of a nuclear response". {HC papers (1998-99) 38 Q308}

17 February Los Alamos National Laboratory Director John Browne, in his first State of the Laboratory address to employees, speaks of the need to take on new national-security work against CBW-weapons proliferation. He says that the blend of scientific talent available at LANL is uniquely suited to such work, noting that LANL scientists had invented new ultrasound techniques to identify CW agents inside munitions without having to open them and were now using a new kind of DNA fingerprinting to identify man-made BW agents [see 6 Nov 98]: "It's the life sciences, the physics, the chemistry, the engineering and the computation that come together to allow this laboratory to propose solutions that can't be done at other places". {*Albuquerque Journal* 18 Feb}

17 February The US Arms Control and Disarmament Agency issues an updated list of states that are parties to, or that have only signed, the Biological Weapons Convention, of which the United States is one of the three co-depositaries. The list comprises 160 states of which 142 are full parties to the treaty, two more than in the last-issued USACDA list. The two newcomers are Lithuania, which had acceded a year previously, and Kyrgyzstan, of which the date of accession or succession is said to be unknown but which had submitted a BWC CBM declaration to the United Nations during the 1993 round [see 15 Apr 94]. A year before that, Kyrgyzstan had been a party to the Bishkek declaration of succession to USSR treaty obligations, expressly including the BWC.

18 February Australian Foreign Minister Alexander Downer announces further steps in his country's initiative to accelerate the BWC Protocol negotiation [see 2 Mar 98 and 23 Sep 98]. Besides the high-level meeting that is to be convened later in the year, a National Consultative Group of biotechnology-industry representatives, academics and other interested parties is to be established in order to provide input to Australian negotiating strategy {*Disarmament Diplomacy* Feb}.

18 February The US Army awards a \$295 million contract to Parsons Infrastructure of Pasadena, California, for the design, construction, systematization, operation and closure of a chemdemil facility at Newport Chemical Depot, Indiana, to destroy the 1269 tons of bulk-stored VX nerve-gas there. The requisite state-level environmental permitting process is not yet completed, however, so construction is not scheduled to begin before November. Rather than incineration, the new Newport Chemical Agent Disposal Facility (NECDF) will use neutralization to destroy the agent. {AP in *Indianapolis Star* 19 Feb}

18–20 February In Australia, the University of Melbourne Law School hosts a conference to commemorate the centenary of the 1899 Hague Peace Conference and the 50th anniversary of the 1949 Geneva Conventions. The keynote address is given by Foreign Minister Alexander Downer [see 18 Feb].

18–26 February In Los Angeles, local, federal and California-state authorities join in what is described as the “largest weapons of mass destruction training scenario ever conducted”, *Westwind* 99. Led by the Federal Bureau of Investigation, it tests the integration of crisis management and consequence management [see 12 Mar 96, US House] at all three levels in response to a WMD threat, in this case a simulated sarin nerve-gas bomb set off at Van Nuys airport by a disgruntled former military officer. {*The Beacon* 5 Mar, *DTRA Connection* Apr}

19 February From Koltsovo, Russia, the directorate of the State Research Center of Virology and Biotechnology VECTOR [see 24 Nov 98] publishes a revised proposal for the development of a network of international centres to combat infectious disease and the threat of bioterrorism {*ASA Newsletter* 19 Feb}.

19 February In the United States, threatening letters mailed from Lexington, Kentucky, purporting to contain anthrax spores have begun to be received at about 20 abortion clinics and Planned Parenthood centers across the country, precipitating emergency measures including mass evacuation and dousing with bleach [see also 30 Dec 98]. All are found to be hoaxes. This is reportedly the second wave of anti-abortion anthrax threats to hit the country since 30 October last, when 20 clinics in Indiana, Tennessee, Kansas and Kentucky received letters falsely claiming to contain anthrax. Other forms of anthrax-hoaxing continue [see 30 Dec 98] around the country, and have reportedly become “literally a daily event”. Every threat of anthrax contamination has proved to be false, so the FBI had been quoted as saying on 6 February {*Cox News Service* from Atlanta 6 Feb}.

20 February At Pine Bluff Arsenal, Arkansas, there is a groundbreaking ceremony for the new chemdemil facility now being built there [see 15 Jan]. The contractor, Raytheon Demilitarization Co, expects to employ upto 900 construction workers and then, when the incinerator has been built, 500-600 workers to operate it {AP from Pine Bluff 26 Mar}.

21 February From Tehran the official Iranian news agency IRNA reports that a team of OPCW inspectors has this past week been touring chemical sites, which it does not identify, “in order to confirm the accuracy of the statements issued about these installations”. OPCW Deputy Director-General John Gee, speaking in Tehran on 15 May, says that Iran “has made declarations to the OPCW, and we have carried out two initial inspections at declared chemical installations in this country, which have gone very well indeed”. Iran had submitted these declarations at the time of the Third Session of the OPCW Con-

ference of the States Parties, and the conference was told by the Iranian delegation that the declarations included “information concerning capabilities that were developed during the last years of the war” with Iraq [see 17 Nov 98].

On 27 April, the Tel Aviv newspaper *Ha'aretz* carries the following, by specialist defence correspondent Ze'ev Schiff: “In accordance with the [Chemical Weapons] convention, Iran has submitted the list of its facilities that produce chemical weapons, as well as the locations and sizes of its chemical weapons stockpiles. Moreover, it did not take advantage of the relatively long period provided by the convention for countries to destroy the chemical weapons in their possession. It hurried to do so, demolishing the production lines in the presence of supervisors of the international organization.” The correspondent continues: “Israeli intelligence sources, however, do not believe the reports concerning Iran’s destruction of its chemical weapons. The only way to confirm the reports is by in-depth supervision conducted by the OPCW. But as long as Israel has not yet ratified the convention, it does not have the right to demand such supervision.”

22 February The State of Maryland and the US Environmental Protection Agency issue environmental permits enabling the US Army to proceed with construction of a chemdemil facility to destroy the 1600 tons of bulk-stored mustard gas held in the Edgewood Area of Aberdeen Proving Ground. The \$306 million construction contract has already been awarded to Bechtel National Inc [see 29 Sep 98], and construction is set to begin in April. Rather than incineration, the new Aberdeen Chemical Agent Disposal Facility (ABCDF) will use chemical neutralization followed by biodegradation to destroy the agent. {*CBIAC Newsletter* Spring} The Product Manager for Alternative Technologies and Approaches at ABP, Lt-Col Joseph Pecoraro, is later quoted as saying that the neutralization facility is about 5–10 percent more expensive than an incineration facility would have been: “If it weren’t for the political dynamics, an incinerator would have been perfectly acceptable from a safety standpoint” {*Washington Post* 4 Mar}.

22 February The US Energy Department is planning the construction of a simulated city at its Nevada Test Site that would be available to military and police forces to exercise preparations and techniques for dealing with nuclear, biological or chemical terrorism, so *Defense News* {22 Feb} reports. The secure 1350 square-mile desert test site has about 105 square miles that have not been disturbed by past testing of nuclear weapons.

22 February In the US Congress, the General Accounting Office issues a study {GAO/RCED-99-54} of two US Energy Department programmes that seek to stem WMD proliferation by engaging former Soviet weapon scientists in work on peaceful civilian projects: the Initiatives for Proliferation Prevention (IPP) programme [see 3 Mar 98] and a recent offshoot from it, the Nuclear Cities Initiative. The report describes the two programmes and notes their great potential value in ensuring that WMD-scientists remain in their home-countries rather than migrate to countries of proliferation concern. The report does, however, also observe that some scientists “currently working on Russia’s weapons of mass destruction” are receiving IPP funds, adding that some of the 19 chemical or biological projects on which supported scientists are working “may not be adequately reviewed by US officials”. In this regard, the Energy Department has, GAO also reports, pledged a strengthening of its oversight of the activities. The GAO report also criticizes the IPP programme for inefficiency in getting funds to Russian scientists, observing that Russia has actually been receiving less

than half of the funds put into the programme, the greater part being spent by Energy Department laboratories. GAO investigators visited 15 of the Russian facilities receiving IPP funds, among them one that had been involved in the USSR BW programme, namely the Gamaleya Institute of Epidemiology and Microbiology in Moscow, and also biological facilities that disavowed any such involvement, such as the Engelhardt Institute of Molecular Biology in Moscow and the Institute of Biochemistry and Physiology of Microorganisms near Moscow. Not visited, and therefore not described in the report, was the State Research Center of Virology and Biotechnology (VECTOR) [see 19 Feb], an IPP beneficiary once heavily engaged in Soviet BW work [see 24 Nov 98].

The GAO review had been requested a year previously by the Chairman of the Senate Foreign Relations Committee, Senator Jesse Helms, who issues a statement on the report saying: "It is absolutely unacceptable for the Clinton Administration to donate the US taxpayer's money to Russian scientists who spend their time working on poison gas, biological agents and the new nuclear weapons designs for the Russian Government." {*New York Times* 22 Feb} The Energy Department, which has spent some \$62 million on the IPP programme since 1994, is seeking a further \$30 million for it in its FY 2000 budget, plus another \$30 million for the Nuclear Cities Initiative {*Nature* 4 Mar}.

24 February The State of Arizona puts to death a German citizen, Karl LaGrand, by lethal injection. He had been convicted of murder in 1984. The following week his brother Walter, convicted of the same murder, is also killed by state executioners, in a cyanide gas chamber.

24 February The US Department of Energy is seeking \$797 million for its Nonproliferation and National Security programme in the FY 2000 budget request, \$70 million up from FY99. Testifying before the House Commerce Subcommittee on Energy and Power, Energy Under-Secretary Ernest Moniz states that, in addition to \$60 million for the IPP programme and Nuclear Cities Initiative [see 22 Feb GAO], the request includes \$221 million for Nonproliferation Research and Development to be spent on developing "technologies for detecting nuclear explosions, detecting the production of different forms of WMD, countering chemical and biological weapons that could be released in our cities, and aiding federal, State and local law enforcement agencies". Not included are separate requests of \$36.1 million for Intelligence and \$31.2 million for Counterintelligence. {*Disarmament Diplomacy* Feb}.

26 February US Commerce Under-Secretary for Export Administration William Reinsch announces that his department has imposed a \$750,000 penalty on Aluminum Co of America for unlicensed export of two CW-agent precursors, potassium and sodium fluoride. The chemicals had entered the Australia-Group-inspired US export-control list in 1991, and between then and 1995 Alcoa had on 50 occasions sent shipments to company facilities in Jamaica and Suriname. {*Journal of Commerce* 1 Mar}

27 February In Pakistan, the government has now prepared a law to implement the Chemical Weapons Convention, which, once approved by the Cabinet, will be submitted to Parliament, so the director-general of the Foreign Ministry, Muhammad Hayat Khan, is quoted in the press as saying {DPA from Karachi 27 Feb}.

27 February Israel, with US assistance, has been conducting research on CBW weapons for more than 40 years, so it is re-

ported by a Netherlands newspaper, the Rotterdam *NRC Handelsblad* {27 Feb}, after a lengthy international investigation. This has focused on the Israel Institute for Biological Research at Ness Ziona [see 30 Sep 98]. Particulars are published both in the newspaper and, in further detail, on its website {www.nrc.nl/W2/Lab/Ziona}.

28 February–2 March In Atlanta, Georgia, a research planning conference on *The Health Impact of Chemical Exposures during the Gulf War* is sponsored by the Centers for Disease Control and Prevention in coordination with other offices and agencies of the US Department of Health and Human Services. The purpose, in the words of the convenors, "is to provide a forum for broad public input into the development of a multi-year research plan for investigating the relationship between chemical exposures during the Gulf War and illnesses affecting Gulf War veterans". Plenary speakers and panellists have been chosen to provide a special focus on: the pathophysiology/etiology of illnesses among Gulf veterans; the most appropriate methods for assessing and diagnosing health impacts of exposure to chemicals; the synergistic effect of exposure to multiple chemicals; the role of individual susceptibility; the role of multiple chemical sensitivities, chronic fatigue syndrome, fibromyalgia, autoimmunity and related disorders; the role of adaptation and conditioning; the development of biomarkers for chemical exposures and related illnesses; the most appropriate treatment approaches; and the prevention of similar illnesses in future military deployments. More than 200 scientists are expected to participate, as well as veterans and associated advocacy groups. {GulfLINK from Washington 16 Feb} A lengthy background document reviewing the current state of knowledge about Gulf War illnesses has been prepared for the conference by Syracuse Research Corporation {www.cdc.gov/nceh/meetings/1999/gulfwar/}. In fact, nearly 400 people attend the conference, about 70 percent of them scientists from federal agencies, academic institutions, medical schools and other research and medical organizations or policy makers. The other 30 percent are mostly veterans or veterans' advocates, plus a few non-military people believing themselves to be ill from some sort of chemical exposure. The final report from the conference will be released in about six months time. {GulfLINK from Washington 22 Apr}.

March The US Defense Department submits its annual report to Congress on *Nuclear/Biological/Chemical (NBC) Defense*. It is the sixth to be submitted since the requirement for centralization of CBW defence management within the Office of the Secretary of Defense specified in the FY94 National Defense Authorization Act [see 30 Nov 93]. The executive summary of this 233-page description and assessment of the overall readiness of US armed forces to survive, fight and win in an NBC-contaminated environment states that the department's Chemical and Biological Defense Program (CBDP) "continues to implement congressional direction to improve jointness and reflects an integrated DoD developed program". The summary continues: "This years program continues funding to support the highest priority counterproliferation initiatives. During the past year, the Department reviewed its capabilities to protect against the asymmetric threats from chemical and biological weapons. As a result of the review, funding was identified to enhance and accelerate high-payoff technologies and advanced CB defense systems. The FY00-01 President's Budget Submission includes \$380 million in increased research and development funding for biological warfare defense and vaccines over the FY 2000-05 Future Years Defense Program, as well as additional FY 1999 Emergency Supplemental funding to procure CB defense equipment for the Guard and Reserves to support

the Consequence Management mission. Moreover, the Department continues to procure new CB defense equipment for our forces, due in large measure to the May 1997 *Report of the Quadrennial Defense Review* recommendation to increase planned spending on counterproliferation by \$1 billion over the FY 1999–2003 program period, of which \$732 million was allocated to the DoD CBDP.”

As in last year’s report [see Feb 98], the section recording accomplishments in the Medical Chemical Defense Research Program refers to work on “novel threat agents”, all of which were apparently anticholinesterase agents. Among the seven FY98 projects noted in this regard, one had demonstrated that the agents “were not ionized under physiological conditions and were hydrolyzed at a slower rate than conventional nerve agents”, while another had shown that, for three of the novel threat agents, carbamate pretreatment was required for significant protection by current medical countermeasures.

March The new US Defense Threat Reduction Agency [see 1 Oct 98] currently has a permanent staff of six people in its Chemical and Biological Defense Directorate, which has taken over the CBW-defence management tasks previously falling to the Office of the Secretary of Defense. The directorate, headed by Carmen Spencer, will soon increase in size to 22 civilian and military personnel. The DTRA also has a Technology Security directorate, which performs the tasks of the old Defense Technology Security Agency. Its License Division is responsible for Defense Department review of export licences. {DTRA Connection Mar}

1 March The OPCW Technical Secretariat now has a total staff of 530 people of 66 different nationalities, including 209 inspectors (which is two short of the authorized number) and 40 short-term staff members. About 60 percent of the staff are directly engaged in verification activities. Of the 121 states parties to the CWC, 90 have submitted the initial declarations required of them [see also 20 Mar 98]; most of the defaulters are states that appear to have nothing substantial to declare. Chemical Weapons Production Facilities, 61 in all, have been declared by 9 states parties, namely China, France, India, Japan [see 29 Jul 97], Russia, the UK, the USA and two others whose identities have not been disclosed [but see 28 Sep 97 South and 21 Feb]. Chemical Weapons Storage Facilities, 34 in all and containing some 8 million chemical munitions and over 70,000 tonnes of chemical agents, have been declared by 4 states parties, namely India, Russia, the USA and one other. Production facilities for Schedule 1 chemicals, 26 facilities in all (either Single Small-Scale Facilities or Other Facilities within the meaning of CWC Verification Annex Part VI) have been declared by 20 states parties. Accounting for 18,645 of the 28,091 inspector-days that the OPCW Technical Secretariat has thus far been able to dedicate to the verification process, the Secretariat has now verified destruction of about 200,000 chemical munitions and 2,000 tonnes of chemical agents. {DDG/OPCW conference presentation 5-7 Mar}

1 March In Utah, environmental investigators unearth 25 corroded BW bomblets in a dump site at Dugway Proving Ground. The bomblets are later found to contain spores of *Bacillus subtilis*, a simulant of anthrax bacteria. {Deseret News 6 Mar}

1–9 March In Tehran, Iranian authorities in cooperation with the OPCW Technical Secretariat provide two parallel regional training courses for CWC National Authorities {CBWCB Mar}.

2 March US intelligence-community infiltration of UNSCOM activities in Iraq [see 6 Jan] is the subject of further reporting in

the *Washington Post* {2 Mar}, which attributes its new disclosures to unidentified “US government employees and documents describing the classified operation”. Now described is an effort going beyond interception of the low-power VHF radio transmissions which Iraqi officials had used to direct anti-UNSCOM concealment operations, for which UNSCOM had initially purchased off-the-shelf scanners but had later been given more sophisticated equipment and backup by collaborating national intelligence services. What had reportedly also been happening was that, unbeknownst to UNSCOM, US agents had inserted microwave-intercept equipment into the relay stations that UNSCOM used, with full Iraqi knowledge and approval, to boost the radio signals from the cameras emplaced at dual-use facilities for purposes of remote surveillance as part of the UNSCOM on-going monitoring and verification system [see 15 Dec 94]. The hidden US equipment was used to intercept microwave signals from nearby nodes of Iraqi military communication.

The *Post* had not been able to interview UNSCOM Executive Chairman Richard Butler about its story, but it nonetheless quotes him as having said, in a private conversation with unidentified “close associates”: “If all this stuff turns out to be true, then Rolf Ekeus and I have been played for suckers, haven’t we? I’ve spent a lifetime of helping build and defend the non-proliferation regimes. Piggybacking in this manner [by US intelligence] can only serve the interests of those who reject meaningful efforts at arms control.” Asked about it next day at a public meeting, Ambassador Butler says: “If other people piggy-backed on ... us when they helped with some of those [surveillance] technologies, go ask them about it, but I didn’t approve of that nor did my predecessor. ... If people think that by entering in good faith verification of arms control treaties there is going to be this back-door stuff ... then we’ve got a serious problem.” {USIS Washington File 8 Mar}

3 March President Clinton transmits to Congress a new report on the status of efforts to obtain Iraq’s compliance with UN Security Council resolutions. The report reviews Iraq-UN relations during the period culminating in Operation Desert Fox [see 16 Dec 98]. It states that US and coalition forces have engaged the Iraqi integrated air defense system in the southern and northern no-fly zones [see 11 Feb] on more than 50 occasions since Desert Fox. On Iraq’s residual capabilities in weapons of mass destruction, it summarizes information presented in the January report of UNSCOM to the president of the UN Security Council [see 25 Jan]. It outlines steps being taken in the “deepening of our engagement with the forces for change in Iraq”. {USIS Washington File 3 Mar}

3 March In the US House of Representatives, the Permanent Select Committee on Intelligence conducts an open hearing on *International Biological Warfare Threats and Capabilities*, with testimony from the Special Assistant to the Director of Central Intelligence for Nonproliferation and director of the CIA Nonproliferation Center, John Lauder [see 26 Mar 96], from Dr Ken Alibek [see 13–14 Jul 98], formerly First Deputy Chief of Biopreparat in the USSR, from William Patrick III [see 3 Nov 98], formerly chief of Product Development in the old US biological-weapons programme, and from Stephen Block, professor of molecular biology at Princeton University.

Early in his testimony, John Lauder says: “[T]he preparation and effective use of BW by both potentially hostile states and by non-state actors, including terrorists, is harder than some popular literature seems to suggest. That said, potential adversaries are pursuing such programs, and the threat that the United States and our allies face is growing in breadth and sophistication.” He adds that “about a dozen states ... now either

possess or are actively pursuing offensive BW capabilities for use against their perceived enemies, whether internal or external. Some countries are pursuing an asymmetric warfare capability and see biological weapons as a viable means to counter overwhelming US conventional military superiority. Several states are also pursuing BW programs for counterinsurgency use and tactical applications in regional conflicts, increasing the probability that such conflicts will be deadly and destabilizing." {USIS Washington File 4 Mar}

3–5 March In Pakistan, OPCW Director-General José Bustani makes an official visit, travelling to Lahore as well as Islamabad {OPCW Synthesis Mar/Apr}. A government press release states that, during his reception by Foreign Minister Sartaj Aziz, the latter had said: "Despite the fact that Pakistan and India, through a joint declaration of August 1992 [see 19 Aug 92], had agreed not to acquire or develop chemical weapons, India has made large chemical weapons stockpiles". The Foreign Minister assured the Director-General that Pakistan fully agrees with the aims and objectives of the CWC, which it has ratified with "complete sincerity". {Xinhua from Islamabad 5 Mar} The Director-General is later reported as commending "Pakistan's speedy implementation" of the treaty {Rawalpindi Jang 6 Mar}.

5 March In Moscow, the presidential press service announces that President Yeltsin has instructed Prime Minister Yevgeny Primakov and Presidential Chief of Staff Nikolai Borduzha to prepare a report on the fulfilment during 1998 of Russian obligations under the Chemical Weapons Convention {ITAR-TASS from Moscow 5 Mar}.

5 March In Cape Town, Swiss television journalist Jean-Philippe Ceppi is arrested by South African military-intelligence and police officers reportedly for illegal possession of secret military documents on chemical warfare {AFP and Reuter from Cape Town 7 Mar}. He is released three days later after charges against him under the Protection of Information Act are withdrawn during a magistrate's-court hearing. The documents in question, which concerned apartheid-era South African work on chemical weapons, had been freely available during the Truth and Reconciliation Commission hearings on the subject last year [see 1 Feb], having been submitted in evidence by former SADF Surgeon-General Neil Knobel. {SAPA from Cape Town 8 Mar, WOZA in *Africa News* 11 Mar, London *Guardian* 20 Mar} Defence Department spokesman Colonel John Rolt defends the original decision to charge the journalist on the grounds that, although the documents may indeed have been in the public domain, they were nevertheless "classified" and would remain so until they had been in the state archives for more than 20 years or until the originator of the document chose to "declassify" it. An internal departmental inquiry would be established to determine the status of the document. {Johannesburg *Business Day* 10 Mar} There are suggestions that the TRC had released the documents by mistake as they were among the secret papers which, at the time of the hearings, the TRC and government legal advisers had agreed should remain confidential {Xinhua from Johannesburg 11 Mar}.

5 March In France, President Jacques Chirac inaugurates what is Europe's first P4 microbiological laboratory, built in Lyon by Mérieux. Its British director, Dr Susan Fisher-Hoch, describes it as the first of a new generation. It is designed to resist earthquakes and armed attack, and will be used for the study of such organisms as Ebola and Lassa viruses. There are only three other laboratories in the world built to such a stringent containment standard, two of them in the United

States (at CDC Atlanta and Fort Detrick) the other in South Africa. A fifth P4 facility is under construction in Canada. {*Dernières Nouvelles d'Alsace* 5 Mar, *New Scientist* 6 Mar}

5 March In the US Senate, a new subcommittee of the Committee on Armed Services convenes for its first session: the Subcommittee on Emerging Threats and Military Capabilities, chaired by Senator Pat Roberts, conducts a hearing on *Emerging Threats to US National Security*. Witnesses address several types of threat, notably the sabotage of critical computer systems controlling national infrastructures. There is some attention also to bioterrorism. {FNS transcript 5 Mar} The full committee has a hearing four days later on *US Policies and Programs to Combat Terrorism*, during which it receives detailed testimony on the activities and roles, present and future, of the US military establishment in domestic preparedness against WMD terrorism and cyberattack {FNS transcript 9 Mar}.

5 March In Los Angeles, Rabbi Abraham Cooper, associate dean of the Simon Wiesenthal Center, has been outlining to reporters his findings from a campaign of interviews conducted in Japan the month previously with people associated with the 1932-45 biological-weapons programme of the Imperial Japanese Army, a programme in which huge numbers of prisoners — some say as many as 10,000 — had been killed in laboratory experimentation. This work had been performed by Unit 731 [see 16 Aug 98], of which there are still several hundred surviving veterans. Rabbi Cooper also produces a letter he had received in November 1998 from the director of the Office of Special Investigations in the US Department of Justice, Eli Rosenbaum, which confirms that in 1945 the commander of Unit 731, Lt-Gen Shiro Ishii, and his colleagues had "received immunity from prosecution and ... in exchange they provided a great deal of information to US authorities" [see also 30 Sep 95]. He calls on the US government to rescind the amnesty order protecting the remaining members of Unit 731. {Reuter from Los Angeles 5 Mar, *Los Angeles Times* 26 Apr} He says that he plans to present Congress and the White House with the evidence he has gathered {*New York Times* 4 Mar}.

The public record of the Japanese BW programme is now expanding substantially, notwithstanding the continuing refusal of the Japanese government to open relevant archives. New oral and other history is accumulating, not only from the work of researchers such as Rabbi Cooper, Sheldon Harris [see 16 Aug 98] (whose 1994 book *Factories of Death* is to be published in a Japanese edition on 25 March), Takao Matsumura [see 23 Nov 97], Akira Tanaka [see 23 Nov 97], Keiichi Tsuneishi [see 20 Aug 93 and 5 Dec 94], Yoshiaki Yoshimi [see 2 Aug 95] and Chinese scholars [see 2 Aug 95 and 22–27 Sep 98], but also from a succession of confessional books and other public disclosures by Unit 731 veterans [see 10 Feb 95, 28 Sep 97, 1 Jul 98 and 16 Aug 98] and from testimony being presented in the lawsuit that a group of 108 Chinese has brought in Tokyo against the Japanese government [see 11 Aug 97]. Also, a new hour-long documentary on the subject, *Unit 731: Nightmare in Manchuria*, is about to be screened on the History Channel of US television.

The *New York Times* {4 Mar}, reviewing the new information, has just reported that it suggests "that Japan's World War II germ attacks were even more widespread than first thought, stretching from Burma (now Myanmar), Thailand, Singapore and the Dutch East Indies (now Indonesia) to Russia and Chinese cities and hamlets".

5–7 March In England, at Wiston House, there is a Wilton Park conference on *The Verification Revolution: Human and Technical Dimensions*, convened in coöperation with the Lon-

don-based Verification Research, Training and Information Centre (VERTIC). The presentations include ones by UNSCOM Executive Chairman Richard Butler and OPCW Deputy Director General John Gee. Participants consider the question of whether, over the last decade, a revolution has occurred in the verification of arms control agreements. Speaking from UNSCOM experience, Ambassador Butler sets out characteristics that international organizations tasked with such verification need in order to be effective, viz independence in conducting and financing their operations; access to a significant data-base that includes information provided by states; the power to conduct no-notice on-site inspections; and support from the international community in cases where non-compliance is proved and enforcement action required. {*ASA Newsletter* 19 Feb, *Trust & Verify* Apr} This assessment is endorsed and further illustrated by Tim Trevan [see 19–23 Feb 95 and 22 Aug 95], who, during 1992-95, was Special Advisor to Ambassador Butler's predecessor in office, Ambassador Rolf Ekéus. There are 60 participants, from 16 countries (Australia, Austria, Belgium, Canada, Finland, France, Germany, Hungary, the Netherlands, Poland, South Africa, Sweden, Switzerland, Turkey, the UK and the USA).

7 March In Riyadh, Saudi Arabian Defence Minister Prince Sultan and visiting US Defense Secretary William Cohen agree to establish a joint committee to evaluate CBW weapons threats {AFP from Riyadh 7 Mar}.

7 March In Washington, Virginia, Sidney Gottlieb dies, aged 80. As chief of the CIA Technical Services Division, he had been a central figure during the 1950s and 1960s in the development of clandestine psychochemical and other weapons. {*Washington Post* 11 Mar}

7 March In Missouri, the US Army has been showing reporters around its new E F Bullene Training Facility at Fort Leonard Wood, due to open in June. With the closure of the Chemical Defense Training Facility at Fort McClellan [see 23 Jun 95], Alabama, this is where the Army will teach its antichemical drills and procedures using live agent manufactured on the premises, including GB and VX nerve gases. {*St Louis Post-Dispatch* 7 Mar}

9 March In Baghdad, Serbian CBW expert Ivan Ivanovich arrives for what the London *Sunday Telegraph* {28 Mar} later reports as several days of visits to Iraqi military facilities and a "pharmaceutical plant at Samarra ... which UN weapons inspectors say is a chemical weapons production site" [see also 27 Nov 95]. The newspaper cites no sources for this information. It says that the tour preceded the arrival in Baghdad of a military delegation led by Serbian Deputy Defence Minister Lt-Gen Jovan Djukovic to explore ways in which Serbia and Iraq could cooperate to their mutual advantage. Iraqi opposition sources are soon afterwards quoted as saying that three Serbian germ warfare weapons specialists "in the guise of press or news agency delegations" had arrived in Baghdad last September and had then spent two months visiting facilities in Iraq, including a pharmaceutical plant in Samarra city. {London *Al-Hayat* 1 Apr}

9 March Iranian President Mohammad Khatami, during his address to the Italian parliament, says: "Today, global equilibrium has been disrupted by the claim of supremacy, attempts to assimilate all cultures and communities in an established world order, the temptation of superpowers to transfer their difficulties beyond their natural geographical boundaries, economic expansion, the unrestrained proliferation of military, chemical and

biological weapons, and indifference to spiritual and moral principles. By the critical assessment of international relations of the past, we must reflect upon a future in which all human beings and all societies will have a share. 'Peace' ought not to be interpreted as forcing the world into reconciliation, and 'globalism' should not be defined as self-alienation and assimilation in a domineering culture and global uniformity. We are at the beginning of a long journey in which respecting man, sharing and cooperating with one another are reconsidered through dialogue. In the world we know, all relations once assumed to be certain are now open to a thorough reconsideration and reconstruction." {IRNA 9 Mar}

9 March The Council of the European Union adopts a decision amending the EU regime for controlling exports of dual-use goods, which covers chemicals specified in the CWC schedules and in the Australia-Group lists, in order "to take into account commitments undertaken by Member States in international fora" and also, for reasons of clarity, to consolidate all earlier amendments within a single text. The annexes attached to the decision include the 187-page *List of Dual-Use Goods* that will in future serve to implement the Council Regulation on dual-use goods, EC No 3381/94 [see 25 Apr 95]. The decision, 1999/193/CFSP, is published in the *Official Journal* {L 73} on 19 March, whereupon it enters into force.

9 March The UK Ministry of Defence has awarded the contract for fullscale development and production of the new Integrated Biological Detection System [see 26 Nov 98] to Hunting Engineering Ltd. The contract is worth in excess of £50 million, and more than 20 systems are to be delivered to UK forces over the next few years. Truck-mounted and self-contained, the IBDS can detect an undisclosed variety of BW agents in near real-time, using both proven and innovative technology. [Note: among the various US BW detection systems, BIDS {see 27 Mar 93} can detect four different agents simultaneously, Portal Shield {see 26 Jan 98} eight; in more than 3000 field tests of the Portal Shield array deployed in Bahrain, the false-positive rate has been less than half a percent {AFPS from Washington 16 Mar}.] As with the PBDS procurement, Hunting is partnered by Graseby Dynamics Ltd and EDS Defence Systems, and there are also to be specialist suppliers, among them Cranfield University Bio-Technology Centre {*Defence Systems Daily* 9 Mar, *Jane's Defence Weekly* 17 Mar}

9 March In New York, where the bilateral talks between North Korean and US delegations are now in their ninth day, the North Korean Permanent Representative to the United Nations, Ambassador Li Hyong Chol, releases a letter to the Security Council in which he has written: "At present ... the United States is attempting to isolate and stifle the DPRK, distorting the image of it by linking it to biological and chemical weapons, while driving the situation on the Korean peninsula to the extreme. ... The United States, claiming to be the 'defender of peace', has been denying the war crimes against humanity committed by its troops during the [1950-53] Korean War. ... I hold that the United Nations should make an issue of the United States use of biological and chemical weapons and large-scale massacres and abuse of the UN name in order to prevent their recurrence." {AFP and AP from the UN 10 Mar} [See also 20 Jan Indiana]

9 March US Deputy Assistant Secretary of State Beth Jones testifies before a Senate Armed Services subcommittee on "events inside Iraq and the steps the Administration is taking to try to influence them" [see also 3 Mar]. Her testimony extends to the support being given by the State Department to the INDICT organization in London "to ensure that INDICT can be-

come a major focal point of Iraqi war crimes accountability activity"; and she says: "We are also working with Dr Christine Gosden to provide a grant for a field study of the effects of Saddam's 1988 attacks on the people of Halabja" [see 18–19 Nov 98]. {USIS Washington File 9 Mar} Next day's *Washington Post* {10 Mar} carries an article by Dr Gosden in which she suggests that domestic preparedness against CW terrorism would benefit from the greater understanding of the long-term health effects of CW agents that would come from investigation of the Halabja experience.

11 March In the US House of Representatives, *Domestic Terrorism Involving Weapons of Mass Destruction* is the subject of a hearing before the Military Research and Development Subcommittee of the Committee on Armed Services, this being the fifth such hearing that the subcommittee has convened since March 1996. The witnesses are from the Department of Defense, the Department of Energy, the Department of Health and Human Services, the Department of Justice and the Federal Bureau of Investigation. The focus is on the research and development programmes that support domestic emergency preparedness for responding to WMD terrorism. {FNS transcript 11 Mar}

The National Security, Veterans Affairs and International Relations Subcommittee of the Government Reform Committee conducts a hearing on *Federal Spending on Anti-Terrorism Efforts*, taking evidence from the General Accounting Office, which has produced a series of studies for the subcommittee on administration responses to the terrorist threat [see 20 Nov 98]. Chairman Christopher Shays, opening the proceedings, says: "We ask how ... sprawling and growing antiterrorism and counter-terrorism programs [are] being coordinated across notoriously impervious geocratic barriers". {FNS transcript 11 Mar}

14–18 March In Abu Dhabi, *IDEX '99* takes place, the fourth in a series of large biennial international defence exhibitions and conferences {Washington *Defense News* 29 Mar}. One of its five component half-day conferences is on *The Future of Chemical and Biological Warfare*.

15 March UNSCOM operations in Iraq during 1991–99 are the subject of a lengthy narrative study, *Saddam's Secrets: The Hunt for Iraq's Hidden Weapons*, by a former official of the Commission, Tim Trevan of the UK [see 5–7 Mar], published today by HarperCollins. The book adds substantially to the existing public record of UNSCOM-Iraq relations. Notwithstanding its occasional small errors of fact, the book is received with much commendation by reviewers knowledgeable in its field.

15 March The US Institute of Medicine publishes *Assessment of Future Scientific Needs for Live Variola Virus*, which is the report of a panel of 19 specialists commissioned by federal health and defence agencies to advise on the scientific and medical opportunities that would be lost if the two remaining known stocks of smallpox virus in the world were to be destroyed in accordance with the recommendation of the World Health Assembly [see 2 Feb 98 and 20 Nov 98]. The report observes that "the risks of retaining the stocks ... might well outweigh the benefits", but those benefits include the chance to develop new "agents to protect citizens against a future outbreak of anthrax which could occur, for example, as the result of a bio-terrorist attack". Retained stocks would enable development of better detection and diagnosis technologies, and a more complete understanding of viral pathogenesis and the human immune system. The report also observes that "live variola virus would be necessary if certain approaches to the de-

velopment of novel types of smallpox vaccine were pursued". The chair of the IoM panel, Charles Carpenter, is later quoted as saying that "it is unlikely that a great deal of work would be done on variola in the near future". The director of the original WHO smallpox-eradication campaign, Dr D A Henderson [see 16–17 Feb], says: "Given that [smallpox] has no mammalian host other than man [thus making animal experiments difficult] and that the work has to be done in the uncomfortable and cumbersome surroundings of a [Biosafety Level 4] facility, I doubt that any active research programs will be pursued. ... The only reference I have ever seen to suggest that the [live variola] virus might be needed for a vaccine is in the recent IoM report." {*Nature Medicine* May}

15 March President Clinton, addressing the International Association of Fire Fighters during its annual legislative convention in Washington DC, announces plans to expand the training and equipment of fire-fighters and other first responders that may have to cope with acts of terrorism involving chemical or biological weapons. The Department of Justice and of Health and Human Services will be providing the extra resources. {*Washington Post* 16 Mar} A White House factsheet on these "new efforts to combat terrorism" says that the US Defense Department has already trained over 15,000 first-responders in 52 cities {USIS Washington File 15 Mar}.

15–16 March In New York the Ad Hoc Committee established by UN General Assembly resolution 51/210 to prepare instruments of international law against terrorism convenes for its third session. Under the continuing chairmanship of Philippe Kirsch [see 16–26 Feb] of Canada, it considers the draft convention sponsored by France for the suppression of the financing of terrorism. Work on this, and on the Russian draft convention for the suppression of acts of nuclear terrorism, will continue in a working group of the Sixth Committee of the Assembly during its 54th session. {UN press release L/2918 26 Mar}

16 March In Tehran, *Kayhan International* {16 Mar} publishes an anniversary commemoration of the poison-gas attack on Halabja in 1988, suggesting that, if Iran's War Information Headquarters had not publicized the attack at the time, Saddam Hussein would have launched a widescale CW assault on Tehran and other cities. The article concludes thus: "It is therefore a humanitarian duty to keep memories of the Halabja holocaust alive, so that the world could breathe without the fears of chemical proliferation. Is the Organization for the Prohibition of Chemical Weapons (OPCW), which has unfortunately a selective approach to toxic threats, ready to listen to our words?"

16 March In Moscow, Russian Foreign Minister Igor Ivanov and visiting Italian Foreign Minister Lamberto Dini agree "to accelerate the coordination of a number of intergovernmental agreements and prepare them for signing". One of these concerns the provision of assistance by Italy for the elimination of Russian stocks of chemical weapons [see also 18 May 98, The Hague, and 26–27 May 98]. {Interfax from Moscow 16 Mar} According to the US Defense Department, Italy has pledged \$8 million for a chemdemil-associated project at the Kizner stockpile location [see 26–27 May 98] in the Udmurt Republic {GAO/NSIAD-99-76}.

16 March Sweden notifies the OPCW that it has undertaken a review of its existing national regulations in the field of trade in chemicals in order to ascertain their consistency with the object and purpose of the CWC, as required under Art XI.2(e) of the

Convention. The notification states that the prohibitions relating to the transfer of chemical weapons set out in CWC Art I.1(a) and (d) require states parties to have appropriate export regulations in place. The notification explains in outline what the Swedish regulations are, including their consistency with EC Regulation 3381/94 of the European Union [see 9 Mar], and how their implementation has been changed following the review. Sweden offers assistance, in accordance with CWC Art VII.2, to states parties that have yet to establish their own export controls. {OPCW doc C-IV/NAT.1}

16 March In the US Senate, a joint hearing on *Government-wide Spending to Combat Terrorism: GAO Views on the President's Annual Report* is convened by the Veterans' Affairs Committee and the Appropriations Labor, Health & Human Services and Education Subcommittee. Among those testifying is the head of the National Security and International Affairs division of the General Accounting Office, Assistant Comptroller General Henry Hinton. In his prepared remarks he states that the appreciation of the US intelligence community, which has continuously assessed the foreign-origin and domestic terrorist threats to the United States, is that "conventional explosives and firearms continue to be the weapons of choice for terrorists". He continues: "Terrorists are less likely to use chemical and biological weapons, at least partly because they are more difficult to weaponize and the results are unpredictable. However, some groups and individuals of concern are showing interest in chemical and biological weapons. According to the FBI there were 4 confirmed incidents of terrorism in the United States in 1992, compared with 12 in 1993, zero in 1994, 1 in 1995, 3 in 1996, and 2 in 1997. These incidents involved the use of conventional weapons." {FNS transcript 16 Mar}

16 March In Washington, the eleventh anniversary of the Iraqi CW attacks on Halabja is marked by the Congressional Human Rights Caucus and the Human Rights Alliance, which hold a briefing on the lingering health effects of the attacks. Speaking at it, Dr Christine Gosden [see 9 Mar] calls for more international action to assist health and welfare programmes for the people of Halabja: "We hope to raise support for an international humanitarian and medical collaborative effort to investigate long-term effects of weapons of mass destruction throughout Iraqi Kurdistan. The effort would yield important information about agents used and assist in development of useful countermeasures." Acting Assistant Secretary of State for Near Eastern Affairs, Elizabeth Jones, releases a letter which states: "Eleven years later, the people of Halabja still suffer from the effects of the March 16 attack. There is evidence that they experience much higher rates of serious diseases, particularly cancer, neurological disorders, birth defects and miscarriages." {USIS Washington File 16 Mar}

16-17 March In California, an international government-industry conference and exhibition, *Chem/Bio '99*, takes place at Newport Beach, with the participation of civil defence authorities and manufacturers of equipment for first-responders against what speakers call "terrorist weapons of mass effects" {*Jane's Defence Weekly* 31 Mar}.

17 March In Moscow, Deputy Foreign Minister Georgiy Mamedov meets with visiting UK counterpart David Manning. Matters connected with biological weapons are among those discussed. {ITAR-TASS from Moscow 17 Mar}

17 March US Army Program Manager for Chemical Demilitarization Catherine Herlinger states that 1631 of the 2030 tonnes of CW agents stored on Johnston Atoll have now been de-

stroyed in the Chemical Agent Disposal System (JACADS) there {AFP from Auckland 17 Mar}.

18 March In Italy, the chairman of the National Committee for Biosecurity and Biotechnology, Leonardo Santi, announces the formation of a task force to prepare for the eventuality of bioterrorism. He says that it is to begin work on 13 April with the objective of establishing warning systems to signal the presence of dangerous biological agents in the atmosphere. {ANSA 18 Mar}

18 March The Netherlands Ministry of Economic Affairs has licensed numerous small exports of CW-agent precursors, and also soman nerve gas, to Israel, India and Pakistan since 1992, so it is reported on the current-affairs television programme *Nova* [see also 27 Feb Israel]. {*Algemeen Dagblad* 19 Mar, Tel Aviv *Ma'ariv* 21 Mar}

19 March In South Korea there are military exercises near the demilitarized zone practising defence against North Korean incursion by hot-air balloon, hang-glider or motorized paraglider. According to Defence Ministry officials, North Korea has been importing such vehicles for the past two years and has been training a special unit in their use, either for espionage or perhaps to launch CBW attacks. {*Dallas Morning News* 20 Mar}

20 March In Moscow an interview is published with Col Gen Stanislav Petrov, commander of the Russian Defence Ministry RKhB Protection Troops. Asked about the body that is to function as the Russian CWC National Authority, he has responded: "There are several organizations clawing for the honor. They include, for example, the Presidential Committee for Problems of Conventions, which was once chaired by the Academician Anatoly Kuntsevich. Initially, the organization was formed to facilitate and speed up Russia's participation in the [Chemical Weapons] Convention. The Committee did its job and apparently could have quietly faded away, but no. It is not all that anxious to be disbanded and is looking for ways to justify its existence now. The Defense Ministry is of the opinion (and we have reported this to the top leadership of the country on many occasions already) that the Committee, which comprises more than 60 expensive state executives, is something we can do without easily enough and be the better for it. So in order to cut expenses, the Defense Minister is suggesting that we transfer these functions to the Ministry's National Center for the Reduction of Nuclear Threat, which has been implementing similar tasks within the framework of other international agreements in the disarmament sphere." {*Krasnaya Zvezda* 20 Mar}

20 March The Russian Defence Ministry Institute of Microbiology virological centre at Sergiyev Posad (formerly Zagorsk) [see 22 Sep 92 and 25 Feb 98] is shown once again [see 17 Feb 93] on Russian television. The account given emphasises the achievements of the centre in combatting disease, noting its development of hepatitis and Lassa-fever vaccines, notwithstanding its diminishing funding. There is mention of the death of a member of the research staff from Ebola virus two years previously. {Moscow NTV 20 Mar}

Rossiyskaya Gazeta {9 Apr} shortly afterwards publishes a lengthy article about the centre and its research, which contains the following: "The center headed by General [Aleksandr] Makhlay was created in 1954. In the late 1940s, the world learned of biological weapons thanks to the infamous Khabarovsk [trial that was] ... conducted in the USSR and identified as war criminals the Japanese scientists who wore rifle slings while involved in the development and human testing of various lethal strains. But [the scientists] in Khabarovsk were

considered small fry. The leading specialists disappeared without a trace, but some, such as Lt Gen Shiro Ishii [see 5 Mar Los Angeles], continued working in the United States. And it was clear that the talent and experience of these people did not go unutilized during the Cold War years. In the late 1940s and early 1950s, the USSR's leadership already had information to the effect that work on biological weapons was being conducted in the United States and Great Britain. The pathogens and methods of delivering those pathogens that American troops might use had become known. The Geneva Protocol that had been signed back in 1925 stated that if biological weapons will be used against a state, that state has the right to respond in kind. In complete compliance with the convention, the USSR found the resources for research in this field. But the first thing it did was to create not weapons but vaccines capable of protecting and saving the army and civilian population from all possible forms of infection."

The newspaper then goes on to talk about the BWC Protocol negotiation in Geneva. "At the Geneva talks, our military men and diplomats are doing their best to make the protocol as specific a document as possible and eliminate any ambiguous interpretations. It would seem that representatives of all countries party to the 1972 convention should be trying to do the same. But no, the United States' representatives are trying their best to cut work on the draft protocol to a minimum and include in it as many passages subject to variant interpretation as possible. The reason is clear: the Americans want to obtain virtually unlimited access to the biotechnologies of various countries throughout the world — above all, Russia's. At the same time, the appearance of vague formulas in the protocol is extremely advantageous to US biotechnology concerns, which clearly have no intention of revealing their secrets to representatives of international inspection bodies.

22 March On British television, a documentary about UNSCOM, including the reported infiltration of UNSCOM operations by spies [see 2 Mar], is screened by BBC *Panorama*. The Secretary-General of the United Nations subsequently issues a statement saying that both UNSCOM and the IAEA reject allegations made in the programme, and that both have "assured him that UNSCOM Field Office facilities in Bahrain have been used for no other purpose than to promote the logistic and administrative support to operations undertaken by them in accordance with their respective mandates". {UN press release SG/SM/6959 IK/275 13 Apr}

22–23 March In The Hague, the OPCW Scientific Advisory Board Temporary Working Group on ricin convenes under the chairmanship of Dr Tom Inch of the UK. [For further details, see *Progress in the Hague*, above.]

23 March In England, at Blandford, the Dorset Health Authority meets to receive the report of its investigator into the possible health impacts on people living in East Lulworth of the large-scale open-air BW trials of the 1960s and 1970s [see 9 Feb]. The Authority's Consultant in Public Health, Dr Sue Bennett, has said: "The investigation found no clusters of illness, disability or birth defects in East Lulworth or elsewhere in Dorset. ... The number of miscarriages in East Lulworth was lower than the number we would expect to find in a village of that size as was the number of children suffering from a neuro-developmental disorder such as dyslexia, learning disability or cerebral palsy. Sadly as many as one pregnancy in three ends in miscarriage, up to eight per cent of schoolchildren will suffer from a learning difficulty such as dyslexia and five percent may suffer from a learning disability. There was only one severe neuro-developmental disorder for which we could find no obvious ex-

planation." An independent consultant has still to be appointed to investigate the earlier simulated BW tests using zinc cadmium sulphide rather than microbes. {Dorset Health Authority press release 17 Mar}

23 March In Nevada, Governor Kenny Guin signs into law a bill making it a felony to "knowingly develop, produce, stockpile, transfer, acquire, retain or possess a biological agent, toxin or delivery system for use as a weapon". The bill, SB 18, prescribes a maximum of life imprisonment for offenders. It would also make biological threats an offence, specifying a 1-6 year prison sentence and a fine of up to \$5000 for engaging in a hoax. {AP from Carson City 4 and 25 Mar}

23 March US Energy Department Office of Nonproliferation and National Security programmes [see 22 Feb] and Defense Department counterproliferation, cooperative threat reduction and nonproliferation programmes are described in departmental testimony to the Senate Armed Services Subcommittee on Emerging Threats and Military Capabilities [see 5 Mar]. Assistant Defense Secretary Edward Warner states that "[m]ore than 25 countries currently possess — or appear to be developing — nuclear, chemical and biological weapons and the means to deliver them; an even larger number are capable of producing such weapons, potentially on short notice". He identifies "the greatest threat of WMD use" as existing in Korea, "due to the very large North Korean inventory of chemical weapons and several different means of delivery". Bilateral US/South-Korean action has been taken "to improve our combined capability to deter and defend against Pyongyang's weapons programs".

Secretary Warner also tells the subcommittee that NATO "needs to sustain its progress" in addressing WMD risks [see 25 Sep 98 and 8-9 Dec 98]: "NATO is now completing work on a US proposal for a NATO WMD Initiative that would enhance NATO's ongoing efforts against WMD proliferation. The WMD Initiative will: (1) increase intelligence sharing to bolster a better common understanding of the WMD problem; (2) undertake additional political measures to combat WMD proliferation; (3) implement practical defensive measures to improve prospects for successful military operations in a WMD environment; and (4) establish a small WMD Center within NATO's International Staff to coordinate Alliance political and defense efforts against WMD. The Senior Politico-Military Group on Proliferation (SGP) and the Defense Group on Proliferation will be primarily responsible for implementing the WMD Initiative. The WMD Initiative complements the ongoing work of both groups. NATO's work under the WMD Initiative will require the Senior Civil Emergency Planning Committee, and perhaps other NATO bodies, to increase their efforts to improve the ability of the Alliance to respond to a chemical or biological weapons attack against Allies civil populations. Information sharing on civil protection measures will be an essential first step to prepare nations to deal with such an event." {USIS Washington File 24 and 25 Mar}

24 March The European Parliament receives its committee report on the report by the Commission on the application of EC Regulation 3381/94, which set up the Community system of export controls regarding dual-use goods [see 9 Mar] that is currently in force. The Commission has concluded that the regulation is not effective enough, but has not involved Parliament in the drawing up of the new regulation that it is now proposing. The committee report includes a motion for a resolution that "largely agrees" with the analysis presented in the Commission report but calls on the Council to consult with Parliament on the proposal for a new Council regulation. The motion then puts forward a variety of detailed considerations. For example, it

welcomes "the planned extension of EU-wide uniform control to include 'non-physical' technology transfer [see also 1 Dec 98 UK] and thus technologies which are transmitted electronically or orally and are not at present covered by the EC regulation". Also, it "considers that implementation of the catch-all clause will lead to unacceptable discrepancies between Member States in the treatment of exporters, and thus to distortion of conditions of competition within the internal market". And it notes that "due to co-existence of very different licensing systems in Member States a level playing field among European exporters has not been established and that an effective export control regime which would be easy to administer has not been created". It calls on the Member States to "abandon their opposition to a common export control policy for dual-use goods and to create the necessary legal basis in the Council without delay". The motion is subsequently adopted, on 13 April, as a resolution of the European Parliament.

The committee report includes several different definitions of the term *dual-use goods*, the most detailed of which states that the term describes "goods and technologies which, although they are by no means weapons and in most cases primarily intended for civil applications, may be used for military purposes or could significantly enhance the military capacities of the country acquiring them".

24 March NATO launches air strikes against Yugoslavia after the failure of negotiations for peace in Kosovo, where Serbian forces have broken the ceasefire agreed in November and, amid reports of massacre, have begun to drive the majority Albanian population out of the country. The bombing and the ethnic cleansing continue for eleven weeks. There is recurrent talk of impending use by Serbia of its chemical weapons [see 6 Feb and 9 Mar], either against neighbouring countries that assist NATO or against the Kosovo Liberation Army or to terrorize Kosovars or against NATO forces in the event of ground warfare. Four Serbian facilities are identified in the press as places where chemical weapons have been produced: *Prva Iskra* in Baric, *Miloje Blagojevic* in Lucani, near Casak, and *Miloje Zakic* and *Merima*, both in Krusevac {London *Independent* 26 Mar, FAS release 8 Apr, *ASA Newsletter* 15 Apr, Zagreb *Globus* 16 Apr, Rotterdam *NRC Handelsblad* 24 Apr}. NATO spokesmen decline to speak to reporters about any targeting of these facilities or of Serbian chemical weapons {US DoD briefing 9 Apr}. An unidentified senior US Defense Department official is quoted on 15 April, however, as saying that NATO strike planners have specifically avoided ordering raids on three known chemical agent storage facilities in Yugoslavia to avoid sending a deadly plume into the atmosphere {AP from Washington 15 Apr, *New York Times* 16 Apr}.

24 March In Pretoria Regional Court, the former head of the South African apartheid-era CBW programme [see 5 Mar], Brigadier Dr Wouter Basson [see 3 Aug 98] is indicted on 16 charges of murder, 1 of attempted murder, 1 of incitement to murder, 11 of conspiracy to murder, 2 of defeating the ends of justice, 1 of attempted intimidation, 1 of assault, 6 relating to illegal possession and trade in drugs (Ecstasy, Mandrax and cocaine), 1 of contravening the Protection of Information Act and 24 of theft and fraud. One of the theft/fraud charges associates him with Aubin Heyndrickx of Belgium [see 3 May 95] in a deal involving the supply of British-made Chemical Agent Monitors. The charge sheet is in two volumes, its 274 pages relating some really dreadful accusations, including the death by poison of at least 130 people, whose bodies were dumped at sea from military aircraft. The trial is set to begin in Pretoria High Court on 4 October. Brigadier Basson remains free on bail, still working as a medical doctor in a military hospital. {Ber-

lin *tageszeitung* 22 Mar, SAPA and Reuter from Pretoria 24 Mar, Johannesburg *Business Day* 25 Mar}

Some two weeks previously, the government had withdrawn the objections which had blocked release of the full transcript of a court hearing in February 1997 at which Basson had applied for bail [see 1 Dec 97]. It is now reported that one of his statements during the hearing was this: "Mandrax is one of the most potent chemical weapons in the world. ... The new tendency in chemical warfare today is to not kill. There is no sense in having 5000 dead bodies. The entire chemical warfare attempt in the world is aimed at substances which will diminish the enemy's determination and ability to fight." {Johannesburg *Business Day* 12 Mar}

Meanwhile, in Cape Town, the Standing Committee on Public Accounts of the National Assembly is progressing with its own inquiry into the clandestine CBW programme [see 1 Feb]. It adopts a report noting that evidence on Project Coast laid before the Truth and Reconciliation Commission appeared to contradict evidence that the committee had received from former SANDF chief Georg Meiring and surgeon-general Neil Knobel [see 21 Aug 96]. The committee tasks one of its researchers to inquire into the matter by studying transcripts of the TRC evidence and other available documents, reporting back by 31 May. {SAPA from Cape Town 24 Mar, Johannesburg *Beeld* 25 Mar}

24 March In the US House of Representatives, the National Security, Veterans' Affairs and International Relations Subcommittee of the Government Reform Committee holds the first of what is to be a series of oversight hearings on the Defense Department's force-wide Anthrax Vaccine Immunization Program (AVIP) [see 21 Jan]. The Department has said that 220,000 personnel have now been vaccinated, with some 200 refusing {AP from Washington 24 Mar}. Subcommittee chairman Christopher Shays [see 26 Jun 97 and 31 Oct 97] says: "We arrive at this inquiry after traveling a road that began for many veterans in the toxic battlefields of the Gulf War, where they were exposed to multiple vaccines, experimental anti-nerve agent pills and botulism toxoid vaccine, depleted uranium, low levels of chemical warfare agents, pesticides, oil fire smoke and more. We will follow it until we are sure medical force protection means assuring the long term health of US forces not just short-term mission capability." {FDCH Congressional Testimony 24 Mar}

24-26 March In Paramaribo, the government of Suriname in cooperation with the OPCW Secretariat External Relations Division hosts a regional seminar on the Chemical Weapons Convention for the Latin American and Caribbean region. The 35 participants, some of the regional ones sponsored by the Canadian government, are from 15 regional states parties (Argentina, Bolivia, Brazil, Chile, Cuba, Ecuador, El Salvador, Guyana, Mexico, Panama, Paraguay, Peru, Suriname, Trinidad & Tobago and Uruguay), 6 signatory states (Bahamas, Colombia, Dominica, Haiti, Jamaica and St Kitts & Nevis), a non-signatory (Belize) and a non-governmental organization (the Harvard Sussex Program). Secretariat and HSP personnel give presentations, and a paper from the DePaul University International Criminal Justice and Weapons Control Center in the United States is also distributed. Some participants also present implementation or ratification experiences. The seminar is preceded by a half-day course for Suriname National Authority personnel, with presentations by Secretariat personnel. {*OPCW Synthesis* Mar/Apr, OPCW doc S/107/99}

25 March The UK government publishes its first *Annual Report on Strategic Export Controls*. This covers CBW-anti-

proliferation export controls, including the export controls on dual-use chemicals, biologicals and equipment that are being harmonized with those of other countries through the Australia Group. It also covers export controls on other chemicals listed in the schedules of the CWC, though apparently not all of them. Among its details is the information that during 1997 Britain licensed exports of CS munitions to Australia, Bosnia & Herzegovina, the Channel Islands, Finland, Jordan, Kuwait, Norway, Qatar, Singapore and the UAE.

25 March In Washington, the Cold War International History Project of the Woodrow Wilson Institute publishes the 1952-53 USSR Communist Party Politburo documents relating to the Korean War BW allegations that had been presented at one of its seminars by Milton Leitenberg and Kathryn Weathersby in refutation of the allegations [see 10 Nov 98 Washington] {*CWIHP Bulletin* no 11}.

26 March In Russia, the State Commission of Environmental Experts approves the plan for the country's first chemdemil plant, to be built in the village of Gornyy in Samara Oblast [see 19 Jan] {*Moscow Rossiyskaya Gazeta* 26 Mar}.

27 March In New York, the panel established by the UN Security Council to consider disarmament aspects of UN-Iraq relations [see 12 Feb] adopts its report and transmits it to the President of the Council. The other two panels [see 30 Jan] — on humanitarian issues, and on prisoners of war and Kuwaiti property [see 12 Jan] — transmit their reports two days later. The disarmament panel recognises that important disarmament issues remain outstanding and recommends, in effect, a restructuring of UNSCOM. Here is the final paragraph of its report: "In summary, the panel agreed on the possibility of an integrated system that is a reinforced OMV [ongoing monitoring and verification system] within the existing legal framework of resolutions 687, 707, 715 and 1051 as well as the Memorandum of Understanding of 23 February 1998, which would be capable of addressing the outstanding disarmament issues. Some of the parameters necessary for the implementation of such a system were outlined in relevant chapters of this report. They will surely need further elaboration, once the suggested approach is accepted by the Security Council. However, even the best system would be useless if it were to remain a blueprint on paper only. To be effective, any system has to be deployed on the ground, which is impossible without Iraqi acceptance. How this acceptance will be obtained is the fundamental question before the Security Council." {UN doc S/1999/356}

Iraqi news media carry rejections of the report. The Baath party newspaper *Al-Thawra* says: "A new body is an absolute waste of time and an attempt to derail the Security Council ... and Iraq has the right to accept nothing less than the lifting of the embargo" {AFP from Baghdad 2 Apr}.

UN Security Council consideration of the panel reports begins on 7 April when the Council in closed session is briefed by the chairman of the three panels, Ambassador Celso Amorim of Brazil {Reuter and AFP from the UN 7 Apr, *New York Times* 9 Apr}. On the disarmament report he says, according to the US Information Agency: "In essence, the report presents one basic recommendation, namely that a reinforced on-going monitoring and verification be implemented to carry out further the objectives of the Security Council resolutions in Iraq".

The Russian Permanent Representative, Ambassador Sergey Lavrov, says to reporters: "We do believe that we have to move to a new monitoring regime which would be allowing for an enhanced monitoring presence in Iraq and which would also allow in that context to solve whatever disarmament issues

might remain, and this should be done in conjunction with lifting sanctions" {Xinhua from the UN 7 Apr}.

28 March In the United States, CNN Television includes in its *NewsStand* prime-time news magazine a segment on the late Sidney Gottlieb [see 7 Mar] and his connection to the death of Frank Olson in 1953, which had apparently been brought about by covertly administered LSD [see 11 Jul 94].

28–30 March In the United States more than 350 scientists from around the world participate in the second *Annual Conference on Vaccine Research*, sponsored by the Centers for Disease Control and Prevention, the National Foundation for Infectious Diseases, the World Health Organization and six other such bodies. The last of its six component symposia is on *Vaccines against Candidate Bioterrorist Agents*. Among the presentations here is one by Dr Jonathan Smith of USAMRIID, Fort Detrick, on multi-agent-vaccine approaches for infectious agents. He reports on the development of an RNA replicon vaccine-vector based on attenuated VEE virus. Genes from one or more different pathologic viruses are inserted into it to produce a vaccine, the genes being expressed as the VEE RNA self-replicates. He says that rodents have been protected against Ebola, Lassa, Marburg, influenza and Rift Valley Fever when given such a vaccine. {PR Newswire 26 Mar}

29 March The US Department of Commerce Bureau of Export Administration imposes a \$708,000 civil penalty on CN Biosciences Inc of San Diego and its UK subsidiary Calbiochem-Novabiochem (UK) Ltd for unlicensed exports, or unauthorized re-exports, of toxins on 177 occasions during 1992–94 {BXA release 29 Mar, *Journal of Commerce* 1 Apr}. The destinations were Australia, Belgium, Chile, Denmark, Finland, France, Germany, Hong Kong, Ireland, Italy, Japan, Mexico, the Netherlands, Norway, Singapore, Spain, Sweden, Switzerland, Taiwan and the UK. The toxins were botulinum toxin, conotoxin, microcystin, ricin, saxitoxin, staphylococcal enterotoxin, and tetrodotoxin. The quantities involved are not disclosed, but were presumably small.

29 March The US General Accounting Office recommends that the Defense Secretary "review the independent research that researchers report has revealed the presence of squalene antibodies in the blood of ill Gulf War-era veterans and conduct its own research designed to replicate or dispute these results". This is from a GAO report requested by Congressman Jack Metcalf. Squalene is a component of adjuvants used in some experimental vaccines, but not in any licensed vaccines, so the report impacts on two active controversies simultaneously: Gulf War syndrome [see 28 Feb–2 Mar] and the Defense Department anthrax immunization programme [see 24 Mar US House]. The Defense Department is critical of the recommendation, arguing that the "independent research" should be reviewed only after it has been published following peer-review. {GAO/NSIAD-99-5}

29 March–9 April In Geneva, the Ad Hoc Group of states parties to the Biological Weapons Convention reconvenes [see 4–22 Jan] for its fourteenth session of work on the projected 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 57 states parties and four other signatory states. [For further details, see *Progress in Geneva*, above.] The US-based Chemical and Biological Arms Control Institute comments: "The current status of the negotiations has a 'glass half empty, glass half full' quality, depending on one's perspective. Ad Hoc Chairman,

Hungarian ambassador Tibor Toth, characterized the talks as making 'slow but steady progress'. In contrast, a senior US official lamented that the negotiations were 'making little headway'. Outstanding issues remain much as they have for the last year ..."{CBACI Dispatch no 97}

30 March President Clinton transmits to the US Congress the report on chemical and biological weapons defence required under Condition 11.F of the Senate CWC-ratification resolution [see 24 Apr 97] {US Newswire 30 Mar}.

31 March The US Defense Department announces that it is extending its compulsory Anthrax Vaccine Immunization Program [see 24 Mar] to contractors and essential civilian employees who have to spend time in high-threat areas, these currently being identified as Bahrain, Israel, Jordan, Korea, Kuwait, Oman, Qatar, Saudi Arabia, the UAE and Yemen {AFPS from Washington 31 Mar}.

31 March The US Arms Control and Disarmament Agency, established in 1961, ceases to exist at midnight. Its functions are absorbed into the State Department, which has been establishing two new bureaux, one for Arms Control, the other for Nonproliferation, and is to have a new Under Secretary for Arms Control and International Security. Director John Holum, who also serves as Senior Advisor to the President and the Secretary of State on Arms Control and Proliferation, has been nominated for the Under Secretary position. The merger of the US Information Agency into the State Department, which is another part of the same reorganization [see 18 Apr 97 and 19 Oct 98], will take place in October. {FNS transcript of State Department special briefing 31 Mar} President Clinton subsequently announces his intention to nominate Robert J Einhorn to the post of Assistant Secretary of State for Nonproliferation {US Newswire 13 Apr}.

1 April In Japan, following a Cabinet decision on 19 March to establish it under the Prime Minister's Office, the new special team on abandoned chemical weapons in China [see 10 Feb] comes into operation. The team comprises some 20 officials from the Foreign Ministry, the Environment Agency and seven other ministries and agencies. {Asahi News Service from Tokyo 24 Mar}

1 April Iran, in a working paper for the BWC Ad Hoc Group [see 29 Mar–9 Apr], states that experience from the processes of routine inspections for verifying the accuracy of submitted declarations gained by the OPCW Technical Secretariat and states parties "can be effectively utilized in the negotiation of ... the BWC Protocol". The paper continues: "These experiences can help the interlocutors to concentrate on objective perceptions, particularly on visit and investigation procedures, and not to invest so much energy on certain possibilities which are rather subjective and cannot, in practice, be operationalized." The paper proposes that the Ad Hoc Group should invite senior persons from the OPCW Secretariat to a formal session in order to brief the Group "on their assessment of the realities we should consider in our endeavour to conclude an effective and feasible Protocol for the BWC". {BWC/AD HOC GROUP/WP.361}

1 April Iraq has recently abandoned a plan to purchase dual-use equipment in South Africa for its clandestine biological-weapons programme, so it is reported by the London-based newsletter *Foreign Report*, which states that the operation, initiated some three weeks previously as part of Operation Samsam, had become compromised. The purchases were to

have been made both from local manufacturing companies in South Africa and from the South African branches of European companies. The shopping list is said to have included centrifuges, biological cartridge filters and stainless steel suitable for construction of fermenters. Among those people in South Africa whom Iraqi agents there had reportedly been instructed to approach were former employees of the apartheid-era Project Coast [see 24 Mar]. {*Jerusalem Post* 2 Apr, *Radio Free Iraq Report* 16 Apr}

1 April In the UK, the new Joint NBC Regiment [see 8 Jul 98] is established at RAF Honington. It consists of Army personnel from 1st Royal Tank Regiment and Air Force personnel from the RAF Regiment, together with Territorial Army and Royal Auxiliary Air Force elements. It is controlled from Defence NBC Headquarters, also established today, at Winterbourne Gunner, which also controls the Defence NBC Centre there. {*Hansard (Commons)* written answers 30 Mar}

3 April In Pakistan, the Cabinet approves the draft CWC implementing legislation that is to be put before Parliament [see 27 Feb]. Foreign Minister Sartaj Aziz says that the bill will be submitted "very soon". {*Islamabad News* 4 Apr}

5 April UNSCOM operations in Iraq are described by former Chief Inspector Scott Ritter [see 6 Jan] of the United States, who resigned as head of the UNSCOM Concealment Investigations Unit in August 1998, in a book, *Endgame: Solving the Iraq Problem — Once and For All*, published today by Simon & Shuster. The mechanisms which Iraq used for concealing core parts of its weapons-of-mass-destruction programmes, and how UNSCOM strove to defeat them, are the focus of the book, thus making it a useful adjunct to the study by the author's former colleague, Tim Trevan [see 15 Mar]. The book advocates "direct diplomacy" between Iraq and the United States, plus an ending of sanctions and reinstatement of international on-site inspections, as the way forward.

5 April In the UK, the Association of Chief Police Officers has agreed to examine the effectiveness of PAVA (pelargonic acid vanillylamide) as an alternative to CS Spray, which the Chief Constables of Northamptonshire, Nottinghamshire and Sussex have refused to issue to their forces {*London Independent and Daily Telegraph* 5 Apr}.

5 April US Defense Secretary William Cohen announces the formation of an advisory panel to assess domestic response capabilities for terrorism involving weapons of mass destruction. The panel, which was called for by Congress last October and is to be chaired by James Gilmore, Governor of Virginia, is to function for three years and report its findings and recommendations to the President and to Congress. The RAND Corporation has been contracted to support the panel with a federally funded research and development centre. {DoD news release 5 Apr}

8 April In Geneva, during the fourteenth session of the BWC Ad Hoc Group [see 29 Mar–9 Apr], the Netherlands government formally announces the candidature of The Hague for the seat of the international authority that could be established by the BWC Protocol [see 25 Nov 98]. The bid is still being developed. {Netherlands Foreign Ministry press release 8 Apr} The BWC Ad Hoc Group Friend of the Chair on the Seat of the Organization, Ambassador Hayashi of Japan, has just produced a detailed draft questionnaire on which delegations can express the expectations they have of the "OPBW" and its host country {BWC/AD HOC GROUP/WP.365}. The Director-General of the

OPCW has said he would give his full support to the Dutch bid to host the new organization in The Hague {*OPCW Synthesis Mar/Apr*}.

9 April From Moscow, the last president of the USSR, Mikhail Gorbachev, writes as follows about his role in the former Soviet biological-weapons programme: "I gave serious attention to the concern expressed by President George Bush in a confidential conversation we had during my visit to the United States in the summer of 1990. He told me that, according to intelligence data, the Soviet Union was conducting large-scale work in biological weapons production, whereas the United States had stopped such work long ago. I answered that the information I had been receiving formed a different picture. To alleviate the concern, I proposed an exchange of experts to visit the sites that raised suspicions both in the United States and the Soviet Union. I did not receive a response to my initiative from President Bush immediately, but several months later a positive response was received and the exchange of experts began. I see only one way of solving the problems connected with any such weapons: constructive negotiations that could resolve possible problems and also create the climate of trust between states." {*New York Times* 13 Apr}

9 April The UN Security Council receives its seventh six-monthly consolidated report [see 6 Oct 98] on the work of UNSCOM during the 6 October 1998 to 11 April 1999 {UN doc S/1999/401}. During this period, UNSCOM personnel had been withdrawn from Iraq during 11–17 November and from 16 December onwards, for reasons explained in the report. The conclusions presented are as follows: "As is evident from the body of this report, the Commission has not received, in the period under review, the cooperation required of Iraq to enable it to conduct its work as mandated by the Security Council. Unfortunately this means that the Commission is not yet able to give the Security Council the assurances that it requires with respect to the final disposition of Iraq's proscribed weapons programmes and their possible reconstitution. With respect to what remains of Iraq's disarmament obligations and current and future monitoring in Iraq, the position of the Commission remains as set out in the two reports which the Executive Chairman submitted to the President of the Council on 25 January 1999 [q.v.] (consolidated in S/1999/94)."

10–24 April In the Czech Republic, the OPCW training programme for investigations of alleged use (IAU) of chemical weapons advances to the stage of a training exercise. This involves OPCW inspectors and experts on the lists of people nominated to the UN Secretary-General by governments to serve in IAU inspection teams. A fuller exercise is planned for October, also in the Czech Republic. [For further details, see *Progress in The Hague*, above.]

13 April The US General Accounting Office reports to the House Armed Services Committee on progress in the design and construction of two facilities in Russia that are being supported by the Cooperative Threat Reduction (Nunn–Lugar) programme of the US Department of Defense: at Mayak, for storing fissile material removed from Russian nuclear weapons, and at Shchuch'ye [see 25 Sep 98], for piloting a nerve-gas-weapons chemdemil process.

Shchuch'ye is the storage location for some 5600 agent-tonnes of Russian ground-force chemical weapons (tube- and rocket-artillery and guided missiles), around two million munitions in all, corresponding to about 14 percent by agent-mass of the declared Russian stockpile of CW weapons (40,000 agent-tonnes) or 17 percent of the declared nerve-gas stockpile

(32,000 agent-tonnes). Nerve gas is the filling for most of these munitions, but there is also a supply of phosgene-loaded projectiles.

What the US has been supporting — through \$95 million in obligations, of which some \$56 million had been expended, by the end of 1998 — is the establishment of a pilot-plant capable of destroying 95 percent of the nerve-gas munitions held at Shchuch'ye at a rate of upto 500 agent-tonnes per year beginning in 2006. Russia would need to treble the size of the plant, and add capacity for dealing with the large-diameter warheads that the pilot-plant is not capable of handling, if all the Shchuch'ye holdings were to be destroyed within the 15-year time-limit set by the CWC. The 2006 start-up date reflects an 18-month slippage in the schedule since October 1997, which the GAO report explains as follows: "Several factors, including Russia's failure to promptly provide needed information about the chemical weapons to be destroyed, have slowed both completion of the facility's conceptual design and DOD's efforts to refine its \$750 million estimate of the pilot facility's cost to the United States. The project also fell behind schedule because DOD increased the time allotted for constructing, testing, and starting up the pilot facility, due in part to funding limits." The report describes these factors in further detail, and puts forward the following for consideration by the Congress: "Since substantial international assistance is essential for achieving the Shchuch'ye project's broader objectives, the Congress may wish to direct the Secretary of Defense to report to it regarding the specific sources of funding for the four additional facilities needed to eliminate Russia's nerve agent stockpile. If the Secretary of Defense cannot identify these likely sources with specificity, the Congress may wish to consider seeking further justification for the project from the Defense Department." {GAO/NSIAD-99-76}

13 April In the United States, a *Bioterrorism Readiness Plan* is produced by a bioterrorism task-force of the Association for Professionals in Infection Control and Epidemiology (APIC) in cooperation with a bioterrorism working group of the Centers for Disease Control and Prevention (CDC) Hospital Infections Program. The APIC/CDC plan is intended to "serve as a reference document and initial template to facilitate preparation of bioterrorism readiness plans for individual institutions". It addresses four diseases "with recognized bioterrorism potential", namely anthrax, botulism, plague and smallpox, noting that subsequent editions will address additional agents, including tularemia, brucellosis, Q fever, viral hemorrhagic fevers and viral encephalitis, as well as disease associated with staphylococcal enterotoxin B.

14 April In the United Kingdom, the CWC National Authority transmits to Parliament the annual report for 1998 on the operation of the *Chemical Weapons Act 1996*, which implements the CWC in the UK. This records the 12 OPCW inspections made in the UK during the year: five at industrial sites, five at former chemical weapons production facilities, one at the Single Small Scale Facility for Schedule-1 chemicals located at DERA/CBD Porton Down, and one of old chemical weapons found at a British ammunition depot in Germany (in fact abandoned American riot-control-agent munitions [see 27 May 97]). Other information contained in the report concerns the 1998 UK declarations of industrial data, of information on programmes related to protective purposes, and of the type of assistance the UK is prepared to provide under CWC Art X. The operation of licensing and trade controls necessitated by the CWC is described, and also UK activities in support of the OPCW and in dealing with newly discovered old chemical weapons. A breakdown of the annual cost of implementing the CWC is given, and

the work of the CWC National Authority Advisory Committee is also noted.

15 April The UN Security Council in closed session is briefed by UNSCOM Executive Chairman Richard Butler, and also by a representative of the IAEA, as it continues its work on how best to respond to the continuing refusal of Iraq to cooperate with the UN [see 27 Mar and 9 Apr]. Russia boycotts the meeting, its representative, Ambassador Sergey Lavrov, having told reporters that “we would not be participating in the discussion of the UNSCOM and IAEA reports for the simple reason that these reports do not add anything new to the Security Council’s work on Iraq”. {Reuter from the UN 16 Apr} Russia later distributes a draft Council resolution calling for a lifting of all economic sanctions from Iraq while strengthening the UN inspection. Britain and the Netherlands distribute a draft proposing the replacement of UNSCOM by an enlarged body — a “UN Commission for Investigation, Inspection and Monitoring (UNCIIM)” — that would carry out more intrusive inspections of Iraqi suspected weapons sites. {*International Herald Tribune* 17–18 Apr} Iraq expresses dissatisfaction with both proposals.

15 April President Clinton, after his address to the American Society of Newspaper Editors in San Francisco, is asked how his administration would respond in the event of Serbian use of chemical weapons in the Kosovo conflict [see 24 Mar]. He says: “My response would be swift and overwhelming. And we have obviously intelligence about the capabilities of the Serbs in a number of areas militarily, just as we do with other countries. But I think they are quite well aware of the dangers of overly escalating this. And I think that’s all I should say about it right now.” {White House release 15 Apr} According to a British newspaper, this statement had been inspired by information from Belgrade that President Milosevic had spoken to his military commanders about using sarin against a NATO ground invasion {*London Guardian* 28 Apr}.

The day previously, the Federation of American Scientists had put out a release saying: “According to news reports, the Yugoslav Army (VJ) is using the chemical agent BZ against KLA forces along the Albanian border. This is the first occurrence of the use of chemical agents during the current crisis in Kosovo.” {US Newswire 14 Apr} The FAS release did not identify those “news reports”, but FAS staffer Kevin Kavanaugh tells reporters that interviews with doctors working on the Albanian border appeared to confirm earlier KLA claims of BZ being spread by rifle-grenades: “It sounds like BZ. They talk about white smoke, bringing on mental slowness and lethargy like walking through cotton”. {*London Guardian* 17 Apr} He later writes that this information “was confirmed by the humanitarian organizations, Doctors Without Borders and the ICRC, working along the Albanian frontier” {*FAS Public Interest Report* May/June}. Confirmation had not, however, been available from KLA sources in Albania contacted by The Associated Press {AP from Washington 15 Apr}. The FAS release also says that current estimates of the amount of BZ in the VJ inventory are in the 300-ton range, and that the agent is thought to have been loaded into hand grenades, rifle grenades, mortar and artillery shells, and 122mm, 128mm and 262mm rockets.

15 April In the US Defense Department, the Office of the Special Assistant for Gulf War Illnesses announces three new reports {DoD News Briefing 15 Apr DefenseLink transcript}. One, *Case Narrative: the Cement Factory*, is an interim report on the chemical alerts and associated sampling that took place on 12 March 1991 at a cement factory outside Kuwait City thought possibly to have been an Iraqi chemical-weapons filling station. For reasons set out at length in the narrative, that pos-

sibility is now definitely dismissed, and it is judged unlikely that CW agents or munitions were ever present at the factory. The two other reports are ones prepared under contract by the Rand Corporation. One, *Depleted Uranium*, is on the potential health effects of depleted uranium in Gulf War veterans [see 4 Aug 98], and is Volume 7 of the corporation’s *A Review of the Scientific Literature as it Pertains to Gulf War Illnesses* [see 26 Jun 97]. The review has disclosed nothing to indicate negative health effects from either chemical toxicity or emitted radiation at the low exposure levels experienced by veterans. The remaining report, *Military Use of Drugs Not Yet Approved by the FDA for CW/BW Defense*, is about two investigational drugs, pyridostigmine bromide and a vaccine against botulinal toxin, that had been administered to people serving in the Gulf War.

17 April In Serbia, NATO conducts a second major air-strike against the large chemical manufacturing complex at Pancevo, where the adjacent oil refinery, which is one of the two biggest in the country, has already been attacked on several occasions since the start of the air war. It is later reported that the attacks on the complex have destroyed the ammonia and fertilizer facilities there and the mercury-cell chlor-alkali plant, as well as ethylene, vinyl chloride and polyvinyl chloride plants. The president of the Serbian Chemical Society, Miroslav Gasic, e-mails a statement to counterparts abroad noting that huge volumes of chlorine, mercury, hydrocarbons, ammonia, nitrogen oxides, sulphur oxides, phosphorus compounds and hydrogen halides had been released into the atmosphere, and that “a large number of people have had to be treated for poisoning”. {*Chemical & Engineering News* 10 May} Pollution-monitoring stations for air and Danube river-water have been established at the Albanian, Macedonian and Romanian borders. In the UK, Defence Secretary George Robertson tells Parliament: “We take the need to avoid dangerous emissions from nuclear and chemical plants fully into account in making decisions about targets. The UK will comply with its obligations under the First Geneva Protocol.” {*Hansard (Commons)* written answers 10 May}

18 April In Egypt, the Supreme Military Court hands down sentences in the trial of 107 militants that had begun in February. Sentenced to hard labour for life is Ahmed Salama Mabruk, described as head of military operations of the country’s second largest militant organization, al-Jihad. Interviewed by telephone before the sentencing, he tells the *London Al-Hayat* either that the coalition of groups led by Osama bin Laden [see 22 Dec 98 and 15 Feb] or that Jihad (the reporting is ambiguous) possessed chemical and biological weapons, and that plans existed for their use in several attacks on US and Israeli targets. A computer disk containing these plans had been taken from him, he says, by the US Central Intelligence Agency during his arrest last September in Azerbaijan. {AFP and DPA from Cairo 19 Apr, Paris *Le Monde* 21 Apr} The newspaper reports next day, following a telephone interview with an unnamed Jihad leader in an unidentified country, that Jihad “bought these chemical and biological weapons from eastern European countries and the former Soviet Union in the last two years”. The weapons would be “used if needed against US and Israeli targets in case it was impossible to carry out operations against these targets with conventional explosives and weapons”. {AFP from Cairo 20 Apr}

A month previously the *London Al-Sharq al-Awsat* {6 Mar} had quoted from parts of a 20,000-page report of investigations by Egyptian security agencies, which included confessions by defendants in the case. These, the newspaper reported, “have revealed that elements loyal to Bin Ladin have obtained germ and biological weapons by post in return for a small sum”. The newspaper continued: “Factories in the former [Soviet bloc]

eastern countries are supplying whoever wants them viruses causing deadly diseases, such as ebola and salmonella, without verifying the identity of the importer. Thus a member of the organization has managed to obtain an offer for the supply of samples of anthrax and other poisons from a factory in one of the East Asian countries. The germs have been made available at a price equivalent to US\$3695 plus freight charges. At another point in the investigation, the defendants pointed out that a laboratory in the Czech Republic agreed to supply samples of the deadly gas polonium [sic] for a sum equivalent to \$7500 per sample. The laboratory did not inquire about the purposes for using the deadly gas." In its particulars, the information related here is strikingly similar to that reported by the London *Sunday Times* after its journalists had approached a number of culture collections, including ones in Indonesia and the Czech Republic, seeking to purchase pathogens suitable for biological warfare [see 22 Nov 98].

19 April In South Africa, the amnesty committee of the Truth and Reconciliation Commission hears former Vlakplaas commander Eugene de Kock, who is serving a double life sentence for apartheid-era atrocities. He has applied for amnesty over a poison killing in Mozambique that has now become public knowledge following the indictment of Brig Wouter Basson [see 24 Mar Pretoria]. {ANC daily news briefing 20 Apr}

20 April In North Korea, the National Peace Committee issues a statement condemning "criminal manoeuvres" in South Korea "to frantically develop and stockpile biological and chemical weapons in collusion with outside forces". The statement adds the following: "The South Korean puppets, who adopted a policy of developing biological and chemical weapons in the late 1960s and the early 1970s, built, in the late 1970s, a technological basis for cultivating viruses, which are germs for biological weapons, and mass-produced poisonous agents for chemical weapons while relying on US technology and equipment. Based on this, it succeeded in experimenting with bacteria and viruses on the human body and entered a stage of industrializing the production of poisonous agents for chemical weapons in the mid-1980s. In particular, it formally decided to stockpile chemical weapons towards the end of 1993 and unhesitatingly committed a rash act of presenting this decision for the National Assembly's ratification in 1994. ... According to disclosed data, the puppets have brought in a large amount of RH-787, a poisonous agent, labelling it a new generation of rat poison, since the end of 1974. They have also brought in a large amount of the latest generation of binary chemical shells since the mid-1980s." {Pyongyang Central Broadcasting Station 21 Mar} The statement is the latest and most discursive in a series of such denunciations by different North Korean bodies, among them the Korea Democratic Lawyers Association {Pyongyang CBS 22 Apr} and the Committee for the Peaceful Reunification of the Fatherland, which described the purported South Korean CBW armament as "an outrageous challenge to the international law, which strictly bans development, possession and use of biological and chemical weapons" {KCNA from Pyongyang 24 Apr}. Some three weeks previously, the Central Committee of the Korean Buddhists' Federation had denounced a foreign "smear campaign" for its allegations of a non-existent underground nuclear facility in North Korea and its possession of biochemical weapons [see also 9 Mar New York and 23 Mar US] {KCNA from Pyongyang 2 Apr}.

20 April At NATO headquarters, spokesman General Giuseppe Marani announces reports of Yugoslav forces in Kosovo using tear gas to drive civilians from their homes in Pristina [see also 15 Apr]. He says: "Tear gas shouldn't be

used in combat. It can be used for police work. You can use it to pull someone out of a house and arrest him. It shouldn't be used to pull someone out of a house and shoot him." {Reuter from Brussels 20 Apr}

20 April The US Defense Advanced Research Projects Agency is among those testifying today before the Senate Armed Services Subcommittee on Emerging Threats and Capabilities, and the prepared statement of its director, Frank Fernandez, includes an overview of current DARPA research into anti-BW protection. This work has five main thrusts — therapeutic countermeasures, advanced sensors, advanced diagnostics, consequence-management tools, and air/water purification devices — and for each one Dr Fernandez gives examples of recent achievements. He also notes other areas of DARPA work from which anti-BW benefit may emerge, such as the Underground Facilities programme. {FNS transcript 20 Apr}

20–23 April In Ig, the Slovenian government joins with the OPCW Technical Secretariat in convening a regional seminar on the CWC. [For further details, see *Progress in The Hague*, above.]

21 April In China, a former underground garrison of the Imperial Japanese Army near the Russian border in Dongning county, Heilongjiang province, has been found to contain abandoned weapons. These have now been examined by military expert Tian Penghan who, according to the New China News Agency, has confirmed that five of the 800 shells contain a toxic-gas filling and that one of the 20 bombs contains bacteriological material. This is said to be the first time that abandoned chemical weapons have been found in the Dongning garrisons. {Xinhua from Harbin 21 Apr} [Note: It is also the first mention in decades of anything purported to be a Japanese BW munition.]

21–23 April In The Hague, the OPCW Scientific Advisory Board convenes for its second session. [For further details, see *Progress in The Hague*, above.]

22 April In Iraq, where foot-and-mouth disease is afflicting huge numbers of farm animals, foreign journalists are taken on a guided tour of a facility at al-Dawrah, near Baghdad, described as the country's main animal-vaccine factory but now largely disabled by UN disarmament work {Reuter from Baghdad 22 Apr}. In New York, UNSCOM spokesman Ewen Buchanan says: "The reason why we destroyed it was because the Iraqis admitted themselves that they had indeed turned the place into a biological weapons factory producing the deadly agent botulinum toxin" {AP from Daura 22 Apr}.

22 April In Moscow, at a news conference organised by the Russian branch of Greenpeace, Vladimir Petrenko [see 26 Feb 96] speaks about the use of servicemen in tests of chemical weapons at the Chemical Troops Central Scientific Research and Testing Institute, Shikhany (Military Unit 61469, in the Saratov region). In July 1982 he and 20 others had been exposed there to supposedly harmless dosages of unidentified chemical, since when he had suffered from respiratory, stomach and glandular ailments, and had instituted legal proceedings for damages against the Institute. Army documents furnished to him by the Volga region prosecutor's office state that he had "voluntarily agreed to undergo an experiment with a phosphorus-organic substance". He believes this to have been the *Novichok* agent A-232 [see 4 Feb 97]. {Reuter and AFP from Moscow 23 Apr, Moscow *Segodnya* 23 Apr} Asked about

the case by reporters, a former director of the Shikhany institute, Academician Anatoly Kuntsevich, says: "I headed a mammoth research center and could not be aware of everything that went on." {*Moscow News* 12 May}

22 April In Russia, Kurgan Governor Oleg Alexeyevich Bogomolov speaks at a press conference about the chemdemil programme, on which he chairs the cognizant Federation Council committee. He says: "The program, plans and forecasts that we had after the ratification of the convention are not being implemented. First of all because of the horrible financing of this program. There are many things that we must do ... We must work with the population, we must convince the population that this is necessary, that the destruction of chemical weapons will be safe for the population. There must also be certain social guarantees, including in the areas where facilities are to be built." He lays particular stress on the necessity of developing social infrastructure in the chemdemil areas (Shchuch'ye [see 13 Apr] is located in his region). Because of the "miserly financing" of the programme, he says that the available resources cannot be spread over all the stockpiles but must be concentrated "on facilities that pose the greatest danger today" and "on sites that are best prepared for further work, where we have participation of American capital". {FISC transcript 22 Apr 99, via FISC Official Kremlin Int'l News Broadcast, via Nexis}

Meanwhile, at Pochep in the Bryansk region [see 1 Apr 95], which is the location of the largest Russian stockpile of chemical weapons, disquiet is reportedly growing at the prospect of a chemdemil facility being built nearby {*Moscow Radio Russia* 24 Apr}.

22 April The OPCW Technical Secretariat announces that it is cooperating with the UN Institute for Training and Research in organising a thematic workshop on *Developing and Strengthening National Legislation and Policies for the Sound Management of Chemicals*. The Secretariat is here responding to problems faced by member states that have been endeavouring to draft legislation that would implement not only the CWC but also other instruments involving or requiring the regulation of chemicals. The workshop is to be held in Geneva during 22–25 June 1999, the third in a series in which UNITAR has been cooperating with the Intergovernmental Forum on Chemical Safety (IFCS) and with members of the Inter-Organization Programme for the Sound Management of Chemicals (IOMC), namely FAO, ILO, OECD, UNEP, UNIDO and WHO. The International Assistance and Cooperation division of the Secretariat is able to sponsor the participation of up to ten representatives of member states. {OPCW doc S/106/99}

22 April In the Netherlands, a final report is published by the parliamentary commission of inquiry into the 1992 Israeli cargo-aircraft crash at Bijlmer near Amsterdam Schiphol airport [see 27 Jan]. Some two thousand pages in all, based on the testimony of 80 witnesses, the report is critical of the government, particularly the transport and health ministries, and also concludes that, during most of the inquiry, El Al failed to assist in recovering all freight papers. It says, however, that the Commission believes that the entire cargo of the flight has now been accounted for. It also says there is a "direct link between health complaints and the Bijlmer disaster". The report is to be debated next month. {*International Herald Tribune* 22 Apr, Reuter from The Hague 22 Apr}

22 April In the UK, the Scottish Secretary releases the report by the Association of Chief Police Officers in Scotland on the 1997/98 Scottish trial of CS Incapacitant Spray [see 29 Dec

98]. The report generally supports the issue of the weapon within police forces in Scotland, but ACPOS has deferred a decision on extending its use pending the independent assessment on the safety of the spray commissioned by the Department of Health [see 2w4 Sep 98]. Meanwhile the weapon continues to be used by police officers in the two trial areas — Dundee and Strathclyde {*Hansard (Commons)* written answers 8 Mar}.

22 April President Clinton announces his decision to seek a delay in the destruction of remaining stocks of smallpox virus shortly to be debated by the World Health Assembly. He says that his decision is based on a consensus recommendation of his advisers, reflecting agreement among all departments, and that it had been influenced by two recent independent reports from the Institute of Medicine [see and 15 Mar]. He also says: "The decision ... reflects our concern that we cannot be entirely certain that, after we destroy the declared stocks in Atlanta and Koltsovo, we will eliminate all the smallpox virus in existence. While we fervently hope smallpox would never be used as a weapon, we have a responsibility to develop the drug and vaccine tools to deal with any future contingency — a research and development process that would necessarily require smallpox virus. In the end, we reached the conclusion we believe is most likely to reduce the possibility of future loss of life as a result of smallpox." {White House release 22 Apr} There is press reporting about intense differences of opinion on the issue within the administration and among scientists {*New York Times* 22 Apr, *Nature* 29 Apr, *Science* 30 Apr}. Dr D A Henderson describes the decision as "the ultimate folly" {*Baltimore Sun* 6 May}. *The Lancet* {8 May} accepts that available stocks of smallpox vaccine could prove insufficient, but, as the vaccine is not made from the virus, sees this as questionable justification for retaining stocks of the virus.

23 April In Kosovo, in response to a KLA offensive over the past two days, Serbian artillery has been spreading "a poisonous substance that paralyzes the nervous system" [see also 14 Apr and 20 Apr], according to the Tirana *Zeri i Popullit* {23 Apr} quoting one of its "sources on the ground". The day previously, Kosovapress news agency {22 Apr} had carried a similar report. In Belgrade next day, the Yugoslav Army Supreme Command states that the "fact that Yugoslavia does not produce chemical weapons and that its armed forces do not use them is incorporated in the defence concept and strategy of the Yugoslav Army" {Tanjug from Belgrade 24 Apr}. In London, the Chief of the Defence Staff, General Charles Guthrie, says to reporters: "Yugoslavia did have chemical weapons. It is a possibility that Serbia has the remnants of a stock which Yugoslavia had. There have been reports of people going to doctors and being seen in casualty areas with blisters. It is far too early to say what caused those blisters, it may not be chemical weapons, it could be something like phosphorus which is in certain kinds of grenades and I would be very remiss to say it was chemical weapons yet. We will investigate and if it is, it is absolutely monstrous." {MoD briefing 27 Apr} A UK Defence Ministry spokesman says there have been reports that Serbs may be using blistering agents and mentions a refugee in Albania who is being treated for blisters on the hands and feet. The US Defense Department subsequently speaks of five such refugees. Two British mercenaries who had been instructing Albanian volunteers arriving to fight in Kosovo report having witnessed incoming Serb CW artillery shells. {*London Times* and *Scottish Daily Record* 28 Apr, AFP from Washington 28 Apr} Further such allegations continue to be heard over the next two weeks {Kosovapress 3 May, AFP from Kukes 7 May, ATA from Tirana 8 May, *Washington Post* 23 May}, including reports of

the use of a gas causing dizziness and vomiting to clear Dobratin, a village to the north of Podujevo that had been a KLA stronghold {*Philadelphia Inquirer* 5 May, *Washington Post* 23 May}.

23 April In Geneva, the UN Commission on Human Rights adopts a resolution calling upon the government of Iraq to “co-operate with United Nations human rights mechanisms, in particular by receiving a return visit by the Special Rapporteur to Iraq and allowing the stationing of human rights monitors throughout Iraq pursuant to the relevant resolutions of the General Assembly and the Commission on Human Rights” {resolution 1999/14}.

23–25 April In Washington, heads of state or government of the NATO member states assemble for the summit meeting marking the 50th anniversary of the alliance, now expanded to include the Czech Republic, Hungary and Poland. Among the actions taken is the launch of the Weapons of Mass Destruction Initiative [see 13 Apr]. According to the Summit Communiqué, the Initiative will: “ensure a more vigorous, structured debate at NATO leading to strengthened common understanding among Allies on WMD issues and how to respond to them; improve the quality and quantity of intelligence and information-sharing among Allies on proliferation issues; support the development of a public information strategy by Allies to increase awareness of proliferation issues and Allies’ efforts to support non-proliferation efforts; enhance existing Allied programmes which increase military readiness to operate in a WMD environment and to counter WMD threats; strengthen the process of information exchange about Allies’ national programmes of bilateral WMD destruction and assistance; enhance the possibilities for Allies to assist one another in the protection of their civil populations against WMD risks; and create a WMD Centre within the International Staff at NATO to support these efforts.” {NATO press release 24 Apr} The WMD Initiative is designed, so UK Defence Secretary George Robertson later says, “to integrate and further improve Alliance political and military efforts to counter [WMD] proliferation” {*Hansard (Commons)* written answers 10 May}.

25–30 April In Switzerland, at Spiez, the government hosts the second of the chief instructor training programmes in protection against chemical weapons (CITPRO II) it is offering as part of the Swiss CW Art X assistance effort [see 23–27 Nov 98]. Participating are 43 instructors from 33 states. [For further details, see *Progress in The Hague*, above.]

26 April In the UK, the Defence Ministry tells Parliament that “[r]ules of engagement for the use of CR are consistent with the provisions of the Chemical Weapons Convention, which explicitly permits the use of toxic chemicals for law enforcement purposes” {*Hansard (Commons)* written answers 26 Apr}. This clarifies the Ministry response to an earlier parliamentary question about the guidelines that had been drawn up for military use of CR gas, a response which had made no mention at all of the Chemical Weapons Convention or its prohibition of the use of toxic chemicals as a method of warfare: “The use of CR gas by the Armed Forces is governed by prescribed rules of engagement, and the service personnel concerned are fully trained in how to use it” {*Hansard (Commons)* written answers 8 Mar}. Today’s response observes, further, that rules of engagement are “considered and approved for specific operations”, continuing: “Their formulation varies according to the particular circumstances of an operation. The precise rules of engagement that govern the use of CR gas are thus approved on each occasion that its use is authorised.”

26–29 April In The Hague, the OPCW Executive Council convenes for its fifteenth regular session [see 2–5 Feb]. [For further details, see *Progress in The Hague*, above.]

27 April In California, in an anthrax-hoax case, a US District Court convicts Harvey Spelkin [see 30 Dec 98] of threatening to use a weapon of mass destruction. Spelkin had telephoned a false anthrax warning to a court-house in order to avoid a bankruptcy hearing. He is to be sentenced on 26 July. {*Los Angeles Times* 28 Apr}

27 April In the United States, PBS television airs a *Frontline* documentary about the work of UNSCOM in Iraq, *Spying on Saddam*, featuring former UNSCOM Chief Inspector Scott Ritter [see 5 Apr]. Much additional interview material is posted on the *Frontline* website [see also 22 Mar].

28 April In Ljubljana, the National Assembly adopts legislation enabling implementation of the CWC, which Slovenia ratified in June 1997 {STA 28 Apr}.

28 April In Tallinn, the Riigikogu adopts legislation enabling Estonian ratification of the CWC. It also repeals the reservations entered by Estonia when joining the 1925 Geneva Protocol. {Baltic News Service from Tallinn and Estonian Radio 28 Apr}

28 April UK Armed Forces Minister Doug Henderson, appearing before the House of Commons Select Committee on Defence, announces a large new collaborative UK-US research programme into the causes of thus-far-inexplicable Gulf War illnesses. To this end, he says, an agreement is being developed for “future exchanges, particularly for classified information, in order to ensure that both the UK and US are able to keep each other abreast of emerging or relevant research quickly and easily”. He cautions that the history of disease shows that it can take “decades, sometimes centuries” before scientists find a treatment. {London *Independent* 29 Apr}

28–29 April In Munich, at the Sanitätsakademie der Bundeswehr, the German Ministry of Defence holds its *4th Chemical Medical Defence Conference*, the scientific programme being organised by the head of the Academy’s Institute of Pharmacology and Toxicology, Col Prof Dr Szinicz. The conference is international, 175 people from 23 countries participating. There are presentations by specialists from Canada, Germany, Italy, the Netherlands, Norway, Poland, the UK, and the USA, as well as from such international organizations as the OPCW and the WHO. {*ASA Newsletter* 15 Apr and 11 Jun}

29 April In Khartoum, the Sudanese state minister for external relations, Dr Hasan Abidin, receives the French, German and Italian ambassadors and the Khartoum representative of the EU in order, among other matters, to review the stance of Sudan towards the Chemical Weapons Convention {SUNA from Khartoum 29 Apr}.

29 April In Russia, at Novocheboksarsk in Chuvashia, the director of the Khimprom plant, where CW agents were formerly produced [see 12 Sep 97], speaks to reporters about a visit by officials of the US Defense Department during which demilitarization of the plant had been discussed. Director Vladimir Karabanov says that the United States had offered assistance for dismantling the equipment in 12 shops of the plant, ones where CW agents had once been produced and which had not been used for 12 years. Also, the US team had signed a \$0.12 million contract with Chuvashia’s chemists. In June, a group of

US experts is expected to arrive. {ITAR-TASS from Cheboksary 29 Apr}

29 April The United States transmits to the OPCW a paper entitled *Export Controls and the Chemical Weapons Convention*, which presents a justification of “national chemical nonproliferation export controls” and US participation in “informal nonproliferation groups”. The paper rejects the view that these activities violate CWC Art XI.1: “National CW export controls do not hamper the trade of goods for legitimate purposes or hamper legitimate industry, including in the developing world. This is clearly and objectively demonstrable using, for example, an analysis [of] applications to the United States for the export of 54 controlled precursor chemicals and key items of chemical equipment. In 1998, the US required a license for only 1.5 percent of its \$65.5 billion worth of chemical exports. Specifically, in 1998, the US received 824 applications to export chemical materials valued at \$987 million. Of these applications, the US denied two — or 0.24 percent — valued at \$420,000. In other words, the percentage of total dollar value [of] controlled chemical goods not allowed to be exported in 1998 was 0.05 percent. This, in turn, was only 0.000064 percent of the total US chemical goods exported in 1998. Similarly, from 1995–1998, the US rejected 21 (worth \$13.5 million) out of 3722 (worth \$3.28 billion) chemical license applications, or 0.5 percent. These rejections comprised only 0.4 percent of the total dollar value of all applications to export controlled chemical goods.” [Note: While this argument clearly demonstrates how few of the applications are denied, it leaves out the question of how many are simply not made in expectation of denial, nor does it address any impact the export denials might have had on the economies of importing countries, which remains an under-researched subject. The US paper is presumably intended to signify US compliance with CWC Art XI.2(e) {see also 16 Mar Sweden}, though it does not say so.]

29 April In Washington, the Commission to Assess the Organization of the Federal Government to Combat the Proliferation of Weapons of Mass Destruction [see 17 Dec 97] convenes for a public session to take evidence from four panels of experts: (a) serving intelligence-community officials, (b) former senior government officials, (c) members of Congress and (d) non-governmental experts.

In his prepared statement, John Lauder of the CIA [see 3 Mar] says of WMD proliferation: “US intelligence is increasing its emphasis and resources on many of these issues, but there is a continued and growing risk of surprise. We appropriately focus much of our intelligence collection and analysis on some ten states, but even concerning those states, there are important gaps in our knowledge. Moreover, we have identified well over 50 states that are of proliferation concern as suppliers, conduits, or potential proliferants. ... Against the backdrop of an increasing missile threat, the proliferation of chemical and biological weapons takes on more alarming dimensions. At least sixteen states, including those with missile programs mentioned earlier [India, Pakistan, Iran, North Korea, Iraq, Libya and Syria], currently have active CW programs, and perhaps a dozen are pursuing offensive BW programs.” In his accounts of the WMD efforts of individual countries, he suggests that Iran, a party to the CWC, is deliberating constructing treaty-break-out capacity by importing “foreign equipment and materials that could be used to create a more advanced and self-sufficient infrastructure”. {USIS Washington File 29 Apr}

FBI Deputy Assistant Director Dale Watson, in prepared remarks on terrorism, notes the recent sharp rise in the number of chembio hoax incidents [see 19 Feb] — “yesterday’s bomb threat has been replaced with a more exotic biological or chem-

ical threat” — but states that the WMD threat remains real. “WMD criminal cases are those cases primarily dealing with the use, threatened use, or procurement of chemical and biological materials with intent to harm within the United States. These criminal cases have shown a steady increase since 1995, rising from 37 in 1996 to 74 in 1997, 181 in 1998, and 114 to date for 1999, with three-quarters of these cases threatening a biological release [see also 16 Mar US]. The biological agent most often cited in 1998 and 1999 was anthrax.” {USIS Washington File 30 Apr}

29 April In the US House of Representatives, oversight hearings on the Defense Department’s force-wide Anthrax Vaccine Immunization Program (AVIP) continue [see 24 Mar] before the National Security, Veterans’ Affairs and International Relations Subcommittee of the Government Reform Committee. The inquiry now focuses on the safety of the vaccine and its effectiveness against aerosol challenges. Among those testifying are representatives of the General Accounting Office [see 29 Mar], the DoD, the Food and Drug Administration, the only FDA-approved manufacturer of the vaccine — Michigan Biologic Products Institute [see 7 Jul 98], now owned by BioPort Corporation — and immunees who believe themselves to have been sickened by the vaccine. {Philadelphia Inquirer 30 Apr}

29 April US Air Force due date for bids for a 42-month contract for the Agent Defeat Warhead Weaponization Demonstration projected by the Munitions Directorate of the USAF Research Laboratory. The project-description states that the Agent Defeat [see 5 Aug 92 and 10 Jan 96] warhead is required to “disrupt the functioning of fixed ground targets associated with the development, production and storage of chemical and/or biological (CB) weapons; neutralize the maximum possible amount of CB agents residing within the target; and limit the potential for collateral damage”. It should be a 2,000lb-class weapon. {Jane’s Defence Weekly 24 Mar, Jane’s International Defense Review Apr}

29–30 April In Washington, an international conference on *The ‘New Terrorism’: Does it Exist? How Real Are the Risks of Mass Casualty Attacks?* is hosted by the Chemical and Biological Arms Control Institute. There are 81 participants, mostly from the United States but also from Israel, the French embassy and the UK. The conference prospectus includes this: “Rising government investments in programs to combat WMD terrorism have begun to generate a backlash from those who believe that the threat has been exaggerated. Their critique affords us an opportunity to more closely examine the assumptions underlying the rising fear of WMD terrorism. That fear is firmly rooted in a belief that a new type of terrorist has come onto the scene, one with both the motivation to seek mass casualties and the ability to achieve them. How substantial are the differences between ‘old’ and ‘new’ forms of terrorism? What does the emergence of new groups and individuals portend for the future use of WMD? How broadly must the term terrorism be conceived in order to encompass all of the possible non-state uses of WMD? Can we more adequately calibrate the WMD terrorist threat for the period ahead?” There are 25 speakers, with keynote presentations from Don Kerr, Assistant Director of the FBI and Director of the FBI Laboratory, and Paul Schulte, Director of the Proliferation and Arms Control Secretariat of the UK Ministry of Defence. {CBACI Dispatch no 97}

30 April The US State Department issues its 18th annual terrorism report, *Patterns of Global Terrorism 1998*. The list of state sponsors of terrorism remains as before: Cuba, Iran, Iraq, Libya, North Korea, Sudan and Syria. The report says there

were 273 international terrorist attacks during 1998 as compared with 304 during 1997; although the 1998 total was the lowest since 1971, the number of casualties during the year, 6693 including 741 dead, was the highest on record [see also 29 Apr Washington]. {*USIS Washington File* 30 Apr}

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 {London *Independent* 4 May}, 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". {AP from Washington 3 May, *Washington Post* and *Washington Times* 4 May} 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" {AP from Khartoum 4 May}. 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 {*Boston Globe* 13 May}. In a long interview for the London *Al-Sharq al-Awsat* {9 May}, 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* {13 May} 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."

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. {AP from Salt Lake City 3 May, *Los Angeles Times* 4 May}

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. {AFP from Jerusalem 5 May}

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. {MoD release 5 May}

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. {AP from Dover AFB 10 and 12 May, *Salon* 13 May}

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 {Long Island *Newsday* 16 May}. The book has already received much publicity. 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 {PR Newswire 3 May}.

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). {Asahi News Service from Tokyo 7 May} 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 {Kyodo from Tokyo 7 May}.

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." {*Hansard (Commons)* written answers 7 May}

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." {AP from Washington 8 May}

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: water hydrolysis, by Parsons/AlliedSignal; hydrolysis and supercritical water oxidation, by General Atomics; and the Plasma Waste Converter technology of Startech/Burns & Roe. {*Defense Environment Alert* 18 May} 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 {*Hazardous Waste News* 22 Feb, *CommNet* 9 Apr}.

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 {Deseret Chemical Depot press release 10 May}. Also, with the completion of the 4.2-in and 105mm 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] {PMCD release 11 May}.

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 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.” {AFP from Taipei 12 May, *South China Morning Post* and Taipei *Chung-Kuo Shih-Pao* 13 May}

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, the government’s secret intelligence service that is said to have about 2000 fulltime staff {London *Financial Times* 13 May}. 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, perhaps wrongly, to have been furnished by ex-MI6 whistleblower Richard Tomlinson [see 22 Jan] {London *Guardian* 14 May, London *Independent on Sunday* and *Sunday Telegraph* 16 May, London *Guardian* 20 May}. Nahum Manbar [see 22 Jan], who is currently serving a 16-year prison sentence in Israel for selling CW-related materials to Iran, reportedly wants Tomlinson to testify at his appeal {London *Times* 1 Jun}.

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 {Minneapolis *Star Tribune* 12 May}.

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.” {FNS transcript 12 May} The proposed legislation would also make authorized handlers of such agents accountable for any misuse {AP from Washington 12 May}. Similar initiatives are in preparation in regard to nuclear and chemical weapons {*USIS Washington File* 14 May}.

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]. {AFP from Havana 15 May}

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. {Tehran *Iran News* 16 May}

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 {Voice of the Islamic Republic of Iran 15 May}. 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 Art X.7.

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. {IRNA from Sanandaj 17 May and 19 May} 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. {IRNA 25 May}

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”, its Article 3 then specifying these measures. [For further details see *Progress in Geneva*, above]

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 {Yonhap 17 May}.

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. {PR Newswire 24 May}

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.

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. {AP from Albany 19 May, Long Island *Newsday* 20 May}

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 Federal Laws relating to Dangerous Biological Agents* takes place before the Commerce Oversight & Investigations Subcommittee. 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 Centers for Disease Control and Prevention and other parts of the scientific community regarding the efficacy of the April 1997 regulation on shipment of biological agents. {Subcommittee transcript 20 May}

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. {*International Herald Tribune* 28 Apr and 27 May} 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” {*International Herald Tribune* 28 May}.

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 but not later than 2002, of the existing stocks of variola virus” [see 22 Apr], unless a decision to the contrary is taken by the

Assembly in May of that year. 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 a 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". {AFP from Geneva 21 May, World Health Assembly press release 21 May, London *Financial Times* 22–23 May, *International Herald Tribune* 25 May}

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 [*words missing?*] 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."

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". {ITAR-TASS from Tashkent and Uzbek Radio first programme 25 May} US and Uzbek officials are quoted as saying that the agreement envisages upto \$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* {31 May} 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* {25 May}, 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 *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 {Moscow *Rossiyskaya Gazeta* 29 May}.

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 {*News* 27 May}. There is more such reporting a fortnight later {*International Herald Tribune* 14 Jun}. The allegations are described by an Indian army spokesman as "absolutely baseless because they are part of a malicious Pakistani propaganda" {AFP from New Delhi 13 Jun}. The US State Department tells reporters that it has no evidence to support the Pakistani assertion {*Times of India* news service from Washington 17 Jun}.

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.

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. {Abidjan TV 27 May}

ca **27 May** In London, delegations from the French National Academy of Science, 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* {31 May}.

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. {VNA 29 May} 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. {AFP from Hanoi 30 May}.

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 the TACIS/BISTRO programme, is to be held in Moscow on 15 June, following up last year's conference on the same subject [see 18 May The Hague].

Forthcoming events

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 fifth international *Chemical and Biological Medical Treatment Symposium* (CBMTS III) due to take place in Spiez, Switzerland in July has been postponed until 7–12 May 2000. Enquiries to Rudolf Portmann, fax **41-33 228 1402, e-mail: rudolf.portmann@x400.gr.admin.ch.

The sixth Pugwash workshop on *Strengthening the Biological Weapons*

Convention will take place in Geneva on 25–26 September.

A Wilton Park conference *CBW Terrorism — Risks, Implications and Government Responses* will take place at Wiston House, England during 1–3 October. Enquiries to Heather Ingrey, e-mail: heather.ingrey@wiltonpark.org.uk, fax **44-1903 814217.

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