

ent sources. According to reports, UNMOVIC has discussed its requirements with several governments and commercial satellite companies. The next meeting of the college is scheduled for 21-22 May in New York.

22 February The US Central Intelligence Agency posts on its website an unclassified version of its latest six-monthly *Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions*, covering the period through 1 January–30 June 2000 [see 9 Aug 00]. The report had earlier been transmitted to Congress as required under Section 721 of the FY 1997 Intelligence Authorization Act. The report repeats much of what earlier reports in the series had said. Iran, Iraq [see 15 Feb], Libya, North Korea, Sudan and Syria are all identified as having current CW programmes. In contrast to the previous report, which listed only Iran, Iraq and North Korea as perhaps having active BW programmes, this report adds that “evidence suggests that Libya also is seeking to acquire the capability to develop and produce BW agents” and that “it is highly probable that Syria also is developing an offensive BW capability”. In addition, the report again states that Sudan “may be interested in a BW program as well”. Key suppliers are identified as China, North Korea and Russia, while western countries were “not as important as sources for WMD-related goods and materials as in past years”, although the report adds that “Iran and Libya continue to recruit entities in Western Europe to provide needed acquisitions for their WMD programs.”

22 February From the US Defense Department, six new reports are released by the Acting Special Assistant for Gulf War Illnesses, Medical Readiness and Military Deployments, Dale A Vesser. They include an update of the previous year’s information paper, *Iraq’s Scud Ballistic Missiles* [see 27 Jul 00], revised to clarify the toxicity of kerosene, the missile’s fuel. A further four of the releases are case narratives, three of which are unchanged versions of earlier narratives now republished in final form upon the recommendation of the Presidential Special Oversight Board: *US Marine Corps Minefield Breaching* [see 25 May 00], *Possible Mustard Release at Ukhaydir Ammunition Storage Depot* [see 27 Jul 00] and *Possible Chemical Warfare Agent Incident Involving a United States Marine*. The fourth, *Al Jubayl, Saudi Arabia*, is an interim report updating an earlier version [see 12 Aug 97] on the basis of veterans’ comments and an independent investigation by the UK Ministry of Defence [see 20 Jan 00]. The narrative concludes that the presence of chemical warfare agents during the ‘loud noise’ events is “unlikely”, and that chemical warfare agents were “definitely not” present in either the Scud impact or purple T-shirt incidents. The remaining release is a close-out report, *Biological Warfare Investigation*. An initial version had been published in 2000 at the request of the Presidential Special Oversight Board. The current version adds references to documentation not cleared for release at the time of original publication.

23 February In Geneva, the BWC Ad Hoc Group concludes its twenty-second session [see 12 Feb]. The Chairman, Ambassador Tibor Tóth of Hungary, has now circulated more of the “building blocks” that he had begun distributing at the previous session. According to one commentator, the text circulated so far accounts for around 85 per cent of the BWC Protocol. The issues not yet touched upon include the preamble, measures to strengthen BWC Article III, the entry into force criteria, and the appendices. While the procedural report of the session reaffirms that the “rolling text” is the “only basis for negotiations”, only around three dozen square brackets were removed with most activity taking place in informal consultations. Tóth himself

has held over 50 consultations with delegations during the two-week session.

The session has also heard calls from some states parties for Tóth to produce a “chairman’s text” in time for the next session in April. On 12 February, South Africa, supported by New Zealand, Norway and the Netherlands, urged Tóth to distribute a text “as soon as possible before the end of this meeting.” Towards the end of the meeting, the EU stated that “it is only by ... a chairman’s text, that the negotiations will be brought to a successful conclusion. We are also convinced that the Ad Hoc Group need this input as soon as possible given the limited period of time left to us.” Other states parties, though, have been less keen on the introduction of a “chairman’s text”. For example, Iran stated that the introduction of a “chairman’s text” would “endanger the friendly and cooperative atmosphere” of the negotiations, while China insisted that “the rolling text ... continues to constitute the basis of our work”.

23 February In The Hague, a high-level Swiss parliamentary delegation is visiting the OPCW. The speaker of the Swiss National Council, Peter Hess, addresses the Executive Council which is in the final day of its twenty-third session [see 20-23 Feb]. In his address, Hess notes that the Swiss parliament is asking the Swiss government to “come forward with concrete proposals on how Switzerland could join international efforts to assist the Russian Federation more effectively in fulfilling its obligations under the Convention [see 21 Sep 00].”

23 February In the United States, UK Prime Minister Tony Blair and President George W Bush meet for talks at Camp David. Media attention focuses on their discussions on the US plans for National Missile Defense and on EU plans to develop a Common European Security and Defence Policy. Press reporting also alludes to the UK government’s wish to broaden the debate over NMD to include the wider question of proliferation and arms control. However, arms control is not directly mentioned in the joint statement issued after the summit meeting: “We recognize the existence of a common threat stemming from the growing proliferation of weapons of mass destruction (WMD) and increasingly sophisticated missiles for their delivery. We are already working together in this area, and agree on the need for further substantive bilateral consultations, as well as close consultations with other allies. This consultation process, which will involve contacts with other interested parties, will include a review of our common strategic assumptions so that they reflect the contemporary security setting, and especially the growing threat from WMD-armed adversaries in regions of vital interest. We need to obstruct and deter these new threats with a strategy that encompasses both offensive and defensive systems, continues nuclear arms reductions where possible, and strengthens WMD and missile proliferation controls and counter-proliferation measures”. In apparent contrast, the Prime Minister later gives a written answer in the House of Commons: “President Bush and I discussed a range of issues including the growing threat from the proliferation of weapons of mass destruction and their means of delivery and the need for common efforts to counter this. As made clear in our joint statement, arms control and disarmament will continue to be important elements of our strategy to combat this threat.” Later reports cite an unidentified British official as saying that Prime Minister Blair also urged President Bush to support the BWC Protocol.

24 February In Moscow, hazards from chemical-warfare agents remaining on the site of the former Kuzminki Polygon are reported by the Union for Chemical Safety (Russia). Lying just within the Moscow beltway, the 9 square kilometre location had been used for CW test purposes for about 40 years, from the early 1920s until the early 1960s. According to archived re-

ports from the Main Chemical Warfare Directorate to the Defence Commissar in 1937 and 1940: "Unusable toxic agents, which cannot be carried over long distances, are being destroyed at the Kuzminki tests site in Moscow ... Persistent chemical agents and lab waste (20 tonnes), arsenic agents (3 tonnes) and contaminated chemical absorbent (4.5 tonnes) were evacuated from dumping grounds and carried to the Kuzminki site to be destroyed." The Union also reports that samples taken from the site have been analysed in laboratories and found to contain 'mustard gas sulfide' and arsenic. The site is now a popular spot for recreation and fishing.

25 February In the UK, police have commissioned research from CBD Porton Down into possible replacements for CS spray [see 9 Feb], so the London *Sunday Telegraph* reports. The newspaper quotes a member of the self-defence, arrest and restraint subcommittee of the Association of Chief Police Officers, John Harrison, saying that the research would concentrate on an alternative that "will minimise the after-effects" of any spray. The request comes after a series of cases in which people have died after being sprayed with CS. The research will concentrate on examining other chemicals that could be used, including PAVA [see 30 Jun 99], and is expected to be completed by the autumn. Since its introduction in 1996, the CS Spray has been used on more than 10,000 occasions and is now used more often than batons to restrain suspects.

26 February In Washington, approaches to Russia by officials of the Nunn-Lugar programme regarding the biological facility at Pokrov are reported in *Aviation Week & Space Technology*, which quotes Pokrov officials as admitting that, during the cold war period, there were contingency plans to convert the plant to military uses. The plant is for production of animal vaccines and reports to the Ministry of Agriculture. The journal says that the plant has the facilities and resources to generate the same animal diseases it makes vaccines against, and quotes Senator Lugar on a visit he had recently made there [see 8 Dec 00]: "We inspected equipment recently used to produce anthrax, and storage bunkers capable of withstanding nuclear attacks".

The article, based on an advance copy of Lugar's report on his December trip, says that the Senator also hopes to overcome opposition in the House of Representatives to the funding of the CW destruction facility at Shchuch'ye. According to Lugar's report, the two million ground-launched CW munitions, from artillery shells to Scud missile warheads, stored at Shchuch'ye are in "excellent working condition". In his report, Lugar challenges critics [see 6 Aug 99] who claim that the weapons stored at Shchuch'ye "pose no more than an environmental threat to the local population. This contention is dangerously wrong. The size and lethality of the weapons I observed are clearly a direct proliferation threat to the American people. They are small, portable and deadly in the hands of terrorists, religious sects or paramilitary units." During the visit, Lugar had also demonstrated how an 85-mm shell could be concealed and transported in a regular briefcase, a fact which he hoped to use as advocacy in his discussions with Senate and House colleagues.

26–27 February At UN Headquarters in New York, talks take place between Iraqi government representatives and UN officials. The talks are chaired by UN Secretary-General Kofi Annan and the Iraqi delegation is led by Foreign Minister Mohamed Said Al-Sahaf. Iraq reiterates its refusal to allow UN weapons inspectors to return, Al-Sahaf saying: "there will be no return for any inspectors in Iraq – even if sanctions are totally lifted." However, he says that Iraq might allow less intrusive inspections if sanctions are lifted and if Israel and other Middle

East countries are subjected to similar scrutiny. The Iraqi delegation, according to reports, presents the Secretary-General with proof that Iraq has no biological, chemical or nuclear weapons and no long-range ballistic missiles.

Speaking to journalists on 28 February after having briefed the Security Council on the talks, Annan says that the main problems for Iraq are the 'no-fly zones', disarmament and economic sanctions. On disarmament he says: "Iraq maintains that it has fulfilled or indicated that it has fulfilled all the disarmament obligations and requirements placed on it by the council and, of course, the council members have said that if that is the case, let inspectors come in and check it out and certify it." Also speaking after the Security Council session, UK ambassador Jeremy Greenstock says that Iraq's uncorroborated declaration that all weapons have been destroyed cannot be accepted: "There has to be verification, there has to be monitoring, and there has to be inspections on the ground." Annan also indicates that Iraq may be less opposed to ongoing monitoring than it is to random inspections. Further talks are likely to take place in April or May. In addition, he urges the Security Council to "agree on certain critical questions and try to restore the unity of the council."

26 February–6 March In The Hague, a nine-day basic CWC national authority training course was scheduled to take place. However, due to the financial crisis currently affecting the OPCW [see 26 Jan], the course has had to be postponed.

27 February The UK Attorney-General receives application from a Wiltshire coroner for the convening of a new inquest into the death at Porton Down of Ronald Maddison in 1953. For the past two weeks, the coroner has been examining fresh evidence compiled by Wiltshire detectives on Operation Antler [see 5 Dec 00]. If given permission by the Attorney-General, the coroner can apply to the High Court to have the original verdict on the death of the airman quashed. The original inquest was held behind closed doors in 1953, with the coroner concluding that Maddison died of asphyxia. The coroner's report was never released and only Maddison's father was allowed to see it, but he was sworn to secrecy under the Official Secrets Act. A Ministry of Defence spokesman refuses to comment on the coroner's conclusions, adding: "We have, from the outset, been open and co-operating fully with the Wiltshire police investigation. We will continue to do so in the future and with the coroner, if required."

The London *Guardian* publishes extracts of a letter from a senior MoD official to the Medical Research Council in November 2000 in which the civil servant comments on the police investigation as follows: "Whilst we are sceptical about police claims, equally there is insufficient scientific evidence on which they could be either confirmed or refuted. Our ministers have therefore decided that work should be set in hand to establish whether there is any basis to suggestions that Porton volunteers have encountered premature mortality or unusual ill-health related to their exposures. We believe that a soundly based epidemiological study will be the only way to establish these facts [see also 28 and 21 Nov 00]."

27 February The UN Secretary-General transmits to the Security Council UNMOVIC's fourth quarterly report [see 1 Dec 00]. The report covers the period from 1 December 2000 to 28 February 2001, including the fourth meeting of the college of commissioners [see 21-22 Feb]. During the report period, UNMOVIC Executive Chairman Hans Blix has visited the capitals of Austria, France, Norway, Sweden and the UK and also met with representatives of Kuwait and Oman. He has also provided monthly briefings to the president of the Security Council and has also briefed the Secretary-General. Although UNMOVIC

did not participate in the consultations between the UN and Iraq [see 26-27 Feb], Blix had been kept informed of the preparations for and results of the dialogue.

UNMOVIC now employs 44 people from 21 member states, sufficient for the current level of activity. Another training course, the third such, is currently underway in Vienna. When this third course is complete, UNMOVIC will have a roster of more than 120 people trained for activities in Iraq. A fourth course is planned for May. In view of the time lapse between the training and actual employment of staff, UNMOVIC provides all trainees with a newsletter and has recently created its own website at www.un.org/Depts/unmovic/.

The report also details progress in the revision and updating of the lists of dual-use items and material to which the export-import mechanism applies [see 13-14 Feb]. The joint IAEA/UNMOVIC unit established to operate the EXIM monitoring mechanism has continued to receive notifications from member states of exports to Iraq of dual-use equipment. However, it has not received corresponding import notifications from Iraq. On the subject of overhead imagery, the report states that UNMOVIC has discussed its requirements with some governments and commercial providers. The report adds: "While imagery cannot be a substitute for on-site inspection, it can provide a valuable complement to inspection."

The report concludes: "UNMOVIC will be able to assess Iraq's compliance with respect to its obligations under the relevant Security Council resolutions only when the reinforced system of ongoing monitoring and verification is in operation and there is cooperation by Iraq."

28 February In Tokyo District Court there is the 21st hearing in the germ-warfare lawsuit brought against Japan by 180 Chinese plaintiffs [see 5 Feb]. Four elderly Chinese witnesses give testimony on an outbreak of plague they say had been initiated by Unit 731 aircraft in China during 1940-42. Government lawyers, who are claiming that there is no legal jurisdiction for the case, are offering no rebuttal.

28 February In Russia, from Kronshtadt, which is the naval port city on Kotlin Island, 60 km west of St Petersburg in the Gulf of Finland, it is announced that Governor General Viktor Chekesov has promised that the munitions dumps and stored chemicals at the naval base will be removed to the military chemical institute in Shikhany, Saratov, and destroyed. Among the chemicals are ten tons of chloropicrin, so the *St Petersburg Times* reports.

28 February *Polish Business News* carries an article about anthrax suggesting that the outbreak of the disease during the first world war that affected thousands of Russian soldiers in the Kolno region of eastern Poland resulted from a German act of biological warfare. The article quotes Colonel Henryk Arciuch, a veterinarian at the Military Institute of Hygiene and Epidemiology in Puawy: "People in the area affirm that the rise of the disease was not incidental. Many older people believe that anthrax was willingly used to contaminate land, livestock and food in order to inflict massive casualties on Russian forces". According to the article, cases of anthrax among humans and animals in the region were much more frequent during and after the war, with some areas becoming almost completely depopulated.

Since an anthrax outbreak in 1996, veterinarians from the Institute have been investigating the possibility that the anthrax strain responsible was not originally endemic to Poland but was instead introduced to the region as a result of the German sabotage during the first world war. The article also mentions the discovery three years earlier [see 25 Jun 98] by British and Norwegian scientists of a clandestine anti-animal weapon containing anthrax in the possessions of the German saboteur Baron

Otto Karl von Rosen found in a museum the previous year. Samples of the Kolno anthrax strain have been sent to scientists in the US and UK for analysis. If the strain matches that found in Norway, the article concludes that "it would prove without a doubt that the German army did use anthrax against the Russians on what is now Polish territory."

28 February The American-German Sunshine Project publishes a background paper on *Risks of Using Biological Agents in Drug Eradication: A Briefing Paper with Emphasis on Human Health*. Among the paper's recommendations is the following: "Not content to merely undermine the Anti-Ballistic Missile Treaty with a National Missile Defense, US support for biological eradication agents is an attack on another important arms control agreement, the Biological and Toxin Weapons Convention (BTWC). The international community must swiftly and conclusively reject the incorrect arguments that biological weapons prohibitions do not apply to illicit crop eradication because eradication is conducted under color of law enforcement. Failure to do so could result in a dangerous slide down the slippery slope of biological weapons proliferation. At its 5th Review Conference in November 2001, the BTWC should act to prevent the creation of loopholes by affirming in its Final Declaration that there is no exemption in the Convention to allow the development and stockpiling of biological weapons for law enforcement." [See also 21 Feb].

28 February In NATO, the new Long Term Science and Technology Study on *Defensive Aspects of Chemical and Biological Warfare*, which the Netherlands proposed in 1999, is proceeding under the direction of Dr Jan Medema, TNO Prins Maurits Laboratorium, with completion expected in July 2002. The aims, objectives and scope of the study are described in *The ASA Newsletter*.

28 February President Bush transmits to the Congress an outline of his administration's budget for Fiscal Year 2002. The final budget is to be submitted in April. For the Defense Department, an expenditure of \$310.5 billion is proposed, which would be an increase of 4.8 percent over the current spending level. The budget package envisages an increase in defence research and development expenditure of about \$20 billion over the next five years [see also 13 Feb] and lists the following areas in which new investment might be made: "leap-ahead technologies for new weapons and intelligence systems; improvements to the laboratory and test range infrastructure; technologies aimed at reducing the costs of weapons and intelligence systems; efforts, such as counterterrorism and counterproliferation that are focused on countering unconventional threats to national security; and funding to continue research, development, and testing of a missile defense program."

28 February From Portland, Maine, *The ASA Newsletter* reports that live smallpox virus is being used in as many as ten laboratories around the world, in addition to those at CDC Atlanta and Vector Novosibirsk that are authorized, under WHO auspices [see 10 Dec 99], to work with the virus. The newsletter cites its source of information as "one of the world's most highly regarded, non-US, research scientists specializing in this field".

28 February 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 botulinum toxin being used as a biological weapon against a civilian population. This is the fourth in a series of articles on possible biological weapons [see 12 May 99, 9 Jun 99 and 3 May 00]. Like the earlier articles (dealing with

anthrax, smallpox and plague) the publication is a consensus statement by 18 specialists from the Working Group on Civilian Biodefense, organised out of the Johns Hopkins Center for Civilian Biodefense Studies.

March From the Harvard University John F Kennedy School of Government comes the first issue of *Perspectives on Preparedness*, an occasional paper series published by the Executive Session on Domestic Preparedness. ESDP, which is also sponsored by the US Department of Justice, describes itself as "a standing task force of leading practitioners and academic specialists concerned with terrorism and emergency management." The series "aims to provide useful information to the concerned professional communities about how the nation can enhance its ability to respond to the threat of terrorism with weapons of mass destruction". The first paper, *A New National Priority: Enhancing Public Safety and Health Through Domestic Preparedness*, is focused on biological and chemical weapons.

1 March In the German Bundestag, PDS member Ulla Jelpke asks the federal government whether Germany has provided humanitarian aid to the victims of the Iraqi CW attack on Halabja [see 18 Mar 88] and what steps the government has taken to encourage German firms involved in supplying the Iraqi CW programme [see 3 Sep 98, and 2 Nov 00] to make humanitarian gestures and actions towards the Kurdish victims. Jelpke also asks the government how many German firms were involved, directly or indirectly, in the Iraqi CW programme. On this subject, the introductory material included with the questions repeats earlier press reports that around 70 per cent of the CW production facilities in Iraq originated from Germany.

On 29 March, the government replies that Germany has supplied considerable humanitarian aid to the Kurds since 1991, but that a direct connection to the attack on Halabja cannot be implied. The answer also stresses the government's position that all responsibility for the attack rests solely with the Iraqi government and that the German government cannot therefore be held responsible. It recalls that some individuals were indeed tried and imprisoned [see 3 Jun 96] and that Germany's export control system was strengthened at the beginning of the 1990s [see 23 Jan 92]. The government also recalls that it submitted a report on the supplies to Iraq by German companies.

2 March The London *Financial Times* publishes information about Iraqi CBW weapons taken from a restricted-distribution report that had been presented to the UNMOVIC College of Commissioners at its recent Vienna meeting [see 21-22 Feb]. The UNMOVIC report, probably the inventory of "unresolved disarmament issues" [see 27-28 Nov 00] upon which UNMOVIC staff had been working, is based on information collected by UNSCOM before it left Iraq in December 1998. The newspaper reports the UNMOVIC document as claiming that 500-700 155mm shells filled with mustard gas remain unaccounted for and that the remaining volume of imported phosphorus trichloride is also unresolved. The report also states that UNSCOM had found documents verifying that "spray/drop tanks for the dissemination of CW agents had been successfully tested with mustard agent and that the necessary stocks of bulk CW agents had been reserved for their filling." On biological weapons, the newspaper quotes the report saying that "the production of Agent B (anthrax spores) could be much greater than stated and, had such production taken place, the remaining quantities would still retain significant activity given the stability of this agent." The report also raises concerns about Iraq's research into viruses, saying that "in the absence of further documentary evidence and explanation, the rationale and the scope of the virus research undertaken remains unclear, in

particular the basis for the selection of the viruses." Reacting to a statement from the US State Department which generally endorses the report's findings, the Baghdad *Al-Qadisiyah* newspaper dubs the allegations "stupid" and says that "Iraq is determined to forge ahead with dismantling UN sanctions and putting an end to aggression with the support of Arabs and forces dedicated to world peace."

5 March The UK Ministry of Defence tells Parliament that, by the end of February, a total of 3,105 UK veterans had been seen by its Gulf Veterans' Medical Assessment Programme, which had been operating since October 1993 [see 27 Oct 99]. Further papers based on the observations [see 3 Jan 99] are being published. The statement continues: "Psychiatric illnesses are predominant among the illnesses seen at the GVMAP, of which Post Traumatic Stress Disorder, with or without co-morbidity, is the most common. The GVMAP physicians have found a few other Gulf related illnesses, predominantly of a respiratory or dermatological nature. They have not found any evidence of a unique syndrome among Gulf veterans or any unusual pattern of disease among veterans who attended the programme. They have not seen any evidence of increased immunological, neurological or renal diseases, or the appearance of any unusual cancers. The symptoms presented by veterans who have attended the GVMAP are similar to those reported by members of the general population attending their GP's surgeries."

6-8 March In Hunt Valley, Maryland, two US Army commands — Medical Research & Materiel and Soldier & Biological Chemical — join in cosponsoring the *2001 Scientific Conference on Chemical & Biological Defense Research* [see 17-20 Nov 98]. Some 60 papers are presented and there are also more than 90 poster presentations. Most of the presenters are from US military establishments or contractors, though there are also British and Dutch ones. The keynote address is by Dr Anna Johnson-Winegar, the Deputy Assistant to the Secretary of Defense for Chemical and Biological Defense Matters.

'Emerging Threats' is one of the dozen or so main conference topics. Included under this heading are seven presentations or posters, four of them on biological matters. On the chemical side there is an Army presentation on "Quantum chemical studies on acetylcholinesterase for investigating emerging nerve agents" and also two Army posters, one entitled "Proteome analysis facility" from USAMRIID, the other "Ab initio studies on hexavalent phosphorous compounds". Among the toxicology posters is one from USAMRICD on "Toxicity and treatment of Russian V-agent (VR) intoxication in guinea pigs".

7 March *Iranian Use of Chemical Weapons: A Critical Analysis of Past Allegations* is the topic of a meeting organised in Washington, DC, by the branch office there of the Monterey Institute Center for Nonproliferation Studies in its 2001 briefing series [see 8 Feb]. The speaker is Dr Jean Pascal Zanders of SIPRI, relying on open sources. He presents a critical analysis of such allegations as that it was Iran rather than Iraq that used chemical weapons in Halabja in March 1988. Zanders' comments on current Iranian statements are summarized as follows: "Iran had pilot-production facilities, but it had no large-scale production facilities and it produced relatively few munitions. Iran also produced sulfur-mustard in limited quantities. The status of production of HCN is unclear. According to current Iranian statements regarding its current status of production programs, Iran destroyed its CW production plants and its munitions after the War. Iran submitted declarations on its past programs to the OPCW and declared the production of 500 tons of agents. Its declarations were certified by the OPCW in November 1999." Zanders' response to recent Congres-

sional testimony by US officials [see 21 Sep 00 and 5 Oct 00] alleging that Iran currently has an active CW programme is summarized as follows: "If Iran is indeed producing CW, why isn't the CWC mechanism to deal with such situations being used? Why hasn't any state country called upon a challenge inspection? The basis for testimonies and other statements made by US officials is unclear. In addition, the allegations are often made in the broad context of WMD."

7 March US Secretary of State Colin Powell tells the International Relations Committee of the House of Representatives that the administration is broadening the US rules of engagement against Iraq to permit attacks on weapons-production facilities and possibly troop-movements as well. Referring to activities prohibited to Iraq under UN Security Council resolutions following the Kuwait war, Secretary Powell says: "If and when we find facilities or other activities going on in Iraq that we believe are inconsistent with our obligations, we reserve the right to take military action against such facilities and will do so".

8 March In Geneva, at the Conference on Disarmament, Secretary-General Vladimir Petrovsky reads out the message addressed to the CD by participants in the recent International Women's Day Disarmament Seminar held in Geneva. The statement includes this: "There have been remarkable successes in the field of arms limitation and restraint and a number of them were achieved in this chamber. Many treaties were born from humble beginnings with General Assembly resolutions. One such is the Biological Weapons Convention, which has now reached a crucial stage in its path towards more effective implementation, as we wait to see if dominant countries and pharmaceutical interests will allow the current verification negotiations to succeed."

8 March The UK Ministry of Defence announces that it has now received the first new supplies of licensed anthrax vaccine and therefore plans to resume its programme [see 26 Feb 98 and 26 Jun 98] of voluntary immunization against anthrax for armed forces personnel deployed to the Persian Gulf.

8 March In Washington, the Carnegie Corporation of New York hosts a meeting on biological weapons to examine the prospects for the BWC Protocol and the Fifth BWC Review Conference and to assess ways in which the foundations and NGOs can collaborate most effectively. The meeting is preceded by a press conference at which the Carnegie Corporation launches a "Challenge Paper" by B Alan Rosenberg entitled *Defining the Debate on Controlling Biological Weapons*. The press conference is attended by former Senator Sam Nunn who, jointly with Ted Turner, now heads a new foundation, the Nuclear Threat Initiative [see 8 Jan]. Attending the meeting are NGOs that receive funding from the Corporation and several other NGOs and individuals.

8-9 March In Brussels, the Swedish presidency of the European Union chairs an international conference on the *Non-Proliferation and Disarmament Cooperation Initiative*. The conference addresses international cooperation on non-proliferation and disarmament in Russia and is meant as follow-up to two previous meetings held under the auspices of the Expanded Threat Reduction Initiative [see 5 and 30 Nov 99] in Brussels and The Hague. The meeting is attended by approximately 150 representatives of EU member states, the US, Japan, Russia and other states of the former Soviet Union, Australia and South Korea.

In his opening address, conference chairman Ambassador Stefan Noreen says: "Supporting the early commencement of the destruction of chemical weapons in Gorny will continue to

be the highest priority to the EU." In addition to the EU funding for Gorny [see 17 Dec 99], Noreen notes that individual EU member states are also making contributions to activities at the facility and at others: "As of today, Germany, joined by the Netherlands, are bringing national contributions to Gorny – a project that is coordinated by Germany, owing to its longstanding bilateral experience in this field, and implemented on the basis of bilateral framework agreements between Russia, Germany and the Netherlands. Finland and Sweden are also involved in bilateral cooperation with regard to chemical weapons destruction in Kambarka and are as well considering national contributions to the chemical weapons destruction facility in Gorny." Addressing the Shchuch'ye facility, Noreen says: "Meanwhile, the EU Commission has also been asked to evaluate possible EU joint contribution already this year to the destruction of chemical weapons in Schuchye on the basis of bilateral co-operation programmes already underway between Russia and Italy and between Russia and the United Kingdom. We hope that European support in this area will also encourage the implementation of planned assistance by the United States in this field [see 30 Oct 00]."

During the meeting, besides formal statements from a number of participants, there are also three technical panels looking at nuclear security programmes, non-nuclear weapons of mass destruction programmes, and science, technology expertise non-proliferation and other security cooperation. The non-nuclear weapons of mass destruction panel is chaired by Friedrich Löhr of Germany. Presentations given include: Russia on the overall state of play concerning the implementation of the CWC; Germany on the EU joint action and the status of the Gorny facility; the US on activities at the Shchuch'ye facility and on the status of export control/border security non-proliferation assistance and cooperation; Sweden and Finland on the state of play at the Kambarka facility; Italy and the UK on their plans to support chemdemil in Russia; and the OPCW Technical Secretariat on the need for a "cooperative approach" to chemical weapons destruction. According to a summary of the panel "Russia confirmed her intention to meet the deadlines established by the Chemical Weapons Convention, and announced that a presidential decree on the chemical weapons destruction plan will be presented shortly." Destruction activities are expected to get underway at Gorny in 2002. In addition, the summary states that "another important development was that a number of European countries, as well as the EU as a whole, were considering substantial support to the Shchuch'ye facility." The US reportedly announces at the conference that it is releasing US\$88 million for the development of the Shchuch'ye facility. The panel on science, technology, expertise non-proliferation and other security cooperation is being chaired by Brian Hatwin of the UK. Presentations to this panel included: the EU/European Commission on non-proliferation of expertise; the secretariats of the ISTC and STCU on their activities; the US on science and technology non-proliferation programmes, in particular on efforts to engage former Soviet BW experts.

There is agreement to hold another ad hoc NDCI conference in 2002 in the light of developments in disarmament and non-proliferation in the Former Soviet Union.

8-9 March In London, VERTIC convenes a workshop on *On-site Inspections in Arms Control and Disarmament Regimes: Theory and Practice*. The 13 experts invited to the meeting come from various governments, international organizations and companies, including: UNMOVIC, the US, the CTBTO, the UK, Israel, the IAEA, Austria, the Netherlands, the OPCW and Science Applications International Corporation. The workshop has been convened partly to inform a VERTIC research report on on-site inspections (OSIs) which is due to be produced in mid-2001. The research will "highlight similarities and differ-

ences between OSIs across regimes”, according to a workshop summary posted on the internet. The summary concludes: “The process of implementing OSIs provides context to information provided by declarations or information exchanges. It also allows the inspection team and inspected state party the opportunity to resolve in a reasonable way unexpected difficulties, as well as any anomalies or uncertainties which allows both sides to meet their obligations and responsibilities. OSIs can be of great assistance in helping states to understand the meaning of compliance by differentiating between ‘technical’ non-compliance and ‘fundamental’ non-compliance. Seemingly inexplicable anomalies can often be resolved through the face-to-face interaction between an inspection team and the inspected state party.”

8–10 March At Princeton University, the Center of International Studies joins with the CIA Center for the Study of Intelligence in conducting a conference on *CIA’s Analysis of the Soviet Union, 1947-1991*. One of the speakers, Raymond Garthoff [see 1 Sep 00] speaks on the disinformation campaign that the US directed at the USSR during the Cold War to suggest that the United States still had an active biological-weapons programme notwithstanding the ostensible US renunciation of the weapons in 1969. Garthoff is quoted as telling the conference: “What hasn’t been known until very, very recently is that the United States did a great deal to stimulate the [USSR CBW weapons] program. We carried out a successful deception operation on both the CW and then on BW in persuading the Russians that we had an active program going even after we had signed the treaty. It was less successful in the sense that it turns out they developed both some very effective chemical and biological agents.”

Timed to coincide with the conference is the declassification and release of more than 850 CIA documents pertaining to the Agency’s analysis of the Soviet Union. Among them are a number related to CBW analysis.

9 March US Assistant Secretary of State for Verification and Compliance Owen Sheaks is interviewed by *Washington File*. Questioned on current State Department initiatives, Sheaks responds as follows: “Big questions in this administration are, right now, the Biological Weapons Convention Protocol and compliance. That’s been an ongoing negotiation. It’s nearing conclusion. The viability of that negotiation is under review right now.” Regarding the Administration’s review of the Protocol and other reviews, Sheaks says: “they are all going on more or less simultaneously with limited staff and resources, and they’re trying to get them all done as soon as possible. That’s why I’m saying over the next year I think you will see this administration’s position coming out on the BWC, on strategic agreements, and on testing agreements. Those are the three big areas.”

12 March In Iraq during May 1993, authorities buried banned chemical and biological materials contained in nine coffins in the largest of the Baghdad graveyards, Al-Karkh Cemetery, so the London *Al-Sharq al-Awsat* reports, quoting an Iraqi police officer, Muhammad Ibrahim al-A’zami, whose duties had included escorting the burial parties and who had fled Iraq some two months previously. He is reported as saying that the coffins were later removed and that “I personally was sure that the coffins, shrouded in Iraqi flags, contained very dangerous material because of the security measures taken around them.”

A week later, the same newspaper publishes an interview conducted in London with Professor Husayn al-Shahristani, an Iraqi nuclear scientist. He, too, describes Iraqi concealment techniques. Al-Shahristani recalls how, during UN inspections, chemical and biological materials had been concealed in trucks

bearing “ice cream” or “food stuff” signs which would be parked in residential areas and returned once the inspection was over. On another occasion, chemical and biological materials concealed in the Al-Rashid barracks in Baghdad had been dumped in the Tigris river, when inspectors arrived acting on a tip-off.

Al-Shahristani is also quoted as saying that, during the Shi’ite uprising in March 1991, aflatoxin was used in the shelling of Karbala.

12 March The *Washington Post* reports a restructuring of CIA staff dealing with non-proliferation and arms control issues. According to the newspaper, Director of Central Intelligence George Tenet announced last week the establishment of the Weapons Intelligence, Nonproliferation and Arms Control Center which would bring together three existing units, namely the Nonproliferation Center, the Arms Control Intelligence Staff and the Office of Transnational Issues’ Weapons Intelligence Staff. The new Center will be headed by Alan Foley, the current head of the Arms Control Intelligence Staff and will have a staff of around 500. Announcing the reform, Tenet is reported as saying he is striving for “increased synergy on key missile and nuclear issues as well as better integration between payload and delivery system analyses.” He adds that “by including all weapons, we will also be better able to surge and grow on issues such as advanced conventional weapons, missile defence and space-related systems. This is a move that many in the weapons field have endorsed and called for over the years.”

13 March In Washington, the Monterey Institute Center for Nonproliferation Studies holds another [see 7 Mar] meeting in its 2001 briefing series. The briefing, entitled *Allegations of WMD Terrorism*, is addressed by Rohan Gunaratna from the University of St. Andrews, Roger Davies from Hazard Management Solutions Ltd and Jeremy McDermott of the London *Daily Telegraph*. All three are authors of case studies in the book *Toxic Terror: Assessing Terrorist Use of Chemical and Biological Weapons*.

14 March In Mongolia, the government bans both import and export of some 66 varieties of poisonous chemical substance used for production of chemical weapons.

14 March In Moscow, the State Duma considers the new *Specialized Federal Presidential Program on CW Dismantlement in Russia in 1995-2009*. The main government speaker is deputy foreign minister Grigory Berdennikov. He informs the Duma that the OPCW had granted Russia’s request for an extension of the deadline for the first phase of destruction [see 30 Nov–3 Dec 99], but he adds that “despite objective reasons, [Russia’s] inability to destroy CW in compliance with approved schedule may become a pretext for political and economic pressure on our country; our incompliance with international commitments under the CWC may be used to discredit general vigorous policy of Russia.” Berdennikov also notes that the 2001 allocations for chemdemil increased six times compared with 2000 and that the revised destruction programme would soon be submitted to the OPCW for approval. He also reports on his ministry’s efforts to increase the amount of international assistance to Russia, which he currently reports stands at about seven per cent of Russian demands for chemdemil.

Zinovy Pak, the director of the Munitions Agency, reports on the state of affairs in the management of CW destruction and the situation at storage and destruction facilities. He recalls that the Munitions Agency is now the federal executive authority for all activities relating to CWC implementation, including placing state orders for CW destruction, conversion of CW production facilities and storage of munitions until their destruction. The duties of the federal executive authorities concerning chemical

disarmament had been set out by governmental resolution [see 17 Nov 00], which had also created the Federal Directorate for Safe Storage and Elimination of Chemical Weapons. According to Pak, the programme priorities are the destruction facilities at Gorny and Shchuch'ye. The former has received 1.1 billion rubles and should become operational in the first quarter of 2002, while Shchuch'ye got 725 million rubles, thus fulfilling one US Senate condition [see 30 Oct 00] for the resumption of financial assistance. Pak also reports that the government has today received for consideration a set of measures, including new conceptual approaches towards realization of the CWC. In November 2000, President Putin had directed that a revised chemdemil programme be submitted this month. According to Pak, it would be unrealistic to meet the 2007 deadline in the CWC and the new programme therefore talks about 2011.

Concluding the debate is its initiator, Nikolai Bezborodov, who suggests that the Committees for International Affairs, Defense, Security and Environment should work on an address to the forthcoming sixth session of the OPCW Conference of the States Parties scheduled to take place in The Hague during 14-18 May. Bezborodov is reported as saying that "the document should confirm Russia's commitment to complete elimination of chemical weapons, describe Russia's difficulties as far as CWC implementation is concerned, recommend the conference to meet Russia's request for postponement of the second stage of CW destruction, reiterate Moscow's appeal to the States Parties to increase substantially their financial assistance to Russia. Otherwise Russia may suspend its participation in the convention or withdraw from the treaty and this should not be allowed to occur: without Russia the CWC will lose its political and humanitarian meaning."

14 March In the UK House of Commons, the Quadripartite Select Committee [see 14 Dec 00] publishes a report on *Strategic Export Controls: Annual Report for 1999 and Parliamentary Prior Scrutiny*. The report sets out the committee's views on a number of issues of general policy and its conclusions and recommendations on the application of strategic export controls on several individual states. The report also describes the outcome of the committee's scrutiny of the Government's 1999 *Annual Report on Strategic Export Controls* [see 21 Jul 00] and its revised proposals for prior parliamentary scrutiny. The report reveals that one request for a permanent license to export CS gas to Israel [see 14 Nov 00] was refused in mid-2000 and that a temporary license had been granted in 1998 for exhibition purposes but that the items had been returned to the UK.

On the subject of the export of chemical precursors to Sudan [see 12 Dec 00] the report states: "[A] letter from Lord Sainsbury to Baroness Cox placed in the Library of the House revealed that one of the three licences in question had covered the export of triethanolamine to the Nile Paints Company for the manufacture of rubbing compounds for use with automotive paints. The other two exporting companies concerned had objected to the disclosure of the end-user." The report continues: "We obtained from the Government details of the five licences granted since May 1997 for goods to Sudan under the IC 350 category, including the value and end-user. One licence was for substantial volumes of a precursor chemical. Our informal inquiries suggested that the volumes and the material were reasonable for the stated purpose. The Foreign Secretary confirmed in oral evidence that the appropriate steps had been taken prior to granting a licence to ensure that the volumes sought were reasonable for the stated purpose."

The report also details the committee's revised proposals for prior parliamentary scrutiny of export licences [see 25 Jul 00]. The committee is willing to limit its scrutiny of a number of categories of export licences, including licence applications for dual-use goods.

14 March In Washington, the Potomac Institute publishes *Out of the Box and Into the Future: A National Security Forecast*, which is the outcome of a conference held in June 2000 to examine trends in science and technology for their possible effects on future national security. The project had been initiated at the request of a bipartisan group of Senators and Congressmen. The report focuses on the impacts of advances in six areas of science and technology, namely energy, advanced materials, nanotechnology, human factors and neuroscience, biomedicine and information and knowledge. In its consideration of the evolving political landscape, the report has the following to say on weapons proliferation: "Weapons of Mass Destruction (WMD) capabilities will be acquired by more nations, sub-national groups and individuals and will likely be used. These capabilities will include nuclear munitions and biological and chemical agents. The most disturbing potential for global catastrophe lies in the development of bioagents, incorporating airborne contagious pathogens." While recognizing the "impressive solutions for diagnosis and treatment of diseases" offered by research in biology, especially genetics, the report also acknowledges the downside: "[T]he proliferation of gene manipulation techniques can easily lead to catastrophic consequences we cannot begin to predict at this point. Results may include specially designed pathogens for terrorist use with great resilience and airborne contagion, perhaps even targeting specific ethnic groups."

15 March In Geneva, at the Conference on Disarmament, the representative of Hungary, Ambassador Joó, includes the following remarks about the BWC Protocol negotiation in what is his farewell address: "Since Hungary chairs the Ad Hoc Group, our special commitment to bringing the negotiations to a successful conclusion needs no detailed explanation. Our assessment is that significant progress has been made towards reaching this objective. The results achieved so far are encouraging and lead us to believe that the Group is in a good position to complete the negotiations in a time-frame enabling it to submit the draft protocol for adoption relatively soon. This can be done at a special conference to be held prior to the Fifth Review Conference in November-December this year. We call upon States Parties to redouble their efforts to implement the relevant decisions of the Fourth Review Conference and make the political decisions necessary for it. Against the background of the statement in other multilateral disarmament forums, including the Conference on Disarmament, the adoption of the protocol would gain even greater significance by demonstrating the determination of the international community to counter the threat posed by the proliferation of weapons of mass destruction."

15 March In The Hague, OPCW Director-General José Bustani addresses a luncheon meeting of the Netherlands Press Association on the financial crisis currently affecting the Organization. He describes the crisis as "a critical one, which may impact the future of our organization." While presenting the successes achieved since the entry into force of the CWC, Bustani says that the funding system laid down in 1997 has outgrown the original budget: "The budget is fictitious ... If we don't restructure, we simply cannot operate."

15 March The OPCW Technical Secretariat issues a new version of the paper entitled *General Obligations under the Chemical Weapons Convention and Related Tasks: Prioritised Checklist for non-possessor States Parties*. As before, the Standing Obligations section of the paper makes no mention of the tasks, save in regard to scheduled chemicals, required under Article VI, paragraph 2. The section does, however, recall for states parties such general injunctions of the CWC as the "Priority of safety and protecting the environment".

15 March In the UK, the CWC National Authority transmits its statutory annual report, for the year 2000, to Parliament.

15 March The UK House of Commons debates the report of the Foreign Affairs Committee on weapons of mass destruction [see 25 Jul 00 and 15 Oct 00]. While most speakers focus on the US plans for missile defence, there is also mention of the CWC and BWC. With respect to the former, the minister responsible, Brian Wilson, says: "The CWC remains a landmark arms control treaty — the first occasion on which an entire category of weapons was prohibited on a verifiable basis. It has proved successful. Only four years after coming into force, 143 states are party to it. The Foreign Affairs Committee urges the pursuit of universality and the Government agree. We continue to urge all non-signatories to ratify the convention, especially those in areas of tension such as the middle east. The European Union is conducting a renewed round of diplomatic lobbying to that end."

At least two speakers mention the ongoing BWC Protocol negotiations in their interventions, including the Liberal Democrat foreign affairs spokesman, Menzies Campbell: "It is imperative that the British Government use all their political influence to try to ensure a satisfactory outcome to the negotiations on the convention. Doubtless the Minister will be able to give the House some assessment of the likelihood of success." However, the minister's only reference to the negotiations is limited, in his final remarks, to the following: "The chemical weapons convention is a good model. Its success has prompted the international community to open negotiations on a protocol to the biological and toxin weapons convention to improve confidence and compliance and to deter potential violators."

15 March The US Energy Department posts its Chemical and Biological National Security Program Strategic Plan on the internet. During 2000, the programme had been renamed from the Chemical and Biological Nonproliferation Program and had been incorporated into the newly established National Nuclear Security Administration's Office of Nonproliferation Research and Engineering. The role of the CBNP is described in the plan thus: "to develop, demonstrate and deliver technologies and systems that will lead to major improvements in the US capability to prepare for and respond to chemical or biological attacks." The programme is underpinned by four areas of technology development—namely chemical and biological detection, modeling and prediction, decontamination and restoration and biological foundations—which feed into "domestic demonstration and application programs". There are currently two such programmes, one piloting technologies and analysis tools to support the protection of a subway system in a major metropolitan area and the other which is developing a portable bio-sensor for deployment in urban areas. The total budget for the programme in FY 2000 had totalled some \$40 million, a marked increase on the \$18.5 million FY 1999 budget.

15 March In California, the Center for Nonproliferation Studies of the Monterey Institute of International Studies posts on its website a detailed *Chronology of Aum Shinrikyo's CBW Activities* since April 1990 that is closely documented from open sources of information. The data presented come from the Monterey WMD Terrorism Database.

16 March In Berlin, the Bundestag rejects a PDS motion which would have labelled the 1988 Iraqi attack on Halabja [see 18 Mar 88] as genocide. The motion also called for the federal government and German companies, in the light of their alleged indirect and direct responsibility for the attack, to provide humanitarian aid to the surviving victims [see 1 Mar]. Specifically, the motion calls for the construction of a hospital and therapy

centre in Halabja. In addition, the motion requests the government to support the demands of international human rights organizations that UNSCOM and UNMOVIC publish their data on the companies which supplied the Iraqi CW programme.

Speaking in response to the PDS motion, members of the other parties acknowledge that the Halabja attack ranks among the worst crimes committed by the Iraqi regime against its own population, but they do not accept its definition as genocide. In addition, no other party supports the PDS contention that the German government or German companies should be held responsible for the attack. Therefore, there is no support for the motion's provision requiring Germany to provide compensation, in the form of humanitarian aid, to the victims of the attack.

16 March In the UK, Sussex Police announces its decision to provide its officers with a chemical weapon known as Captor, which is a hand-held spray device using "synthetic pepper". The Sussex force had been one of only two in the country not to issue CS spray weapons and is the first to opt for a pepper spray. Captor is reportedly used by police forces in Belgium, Germany, the Netherlands and Switzerland. The active chemical in the weapon is Nonivamide, otherwise known as PAVA [see 25 Feb], which is dissolved in aqueous ethanol. According to a police press spokesman, "this is directional, like a liquid jet. It should go right where it's aimed, not hang in a cloud like CS gas. It is the next generation of incapacitant. It is much less serious than hitting someone with a metal baton."

16 March In Washington, the Congressional Human Rights Caucus, the Washington Kurdish Institute and the Human Rights alliance convene a panel discussion to mark the 13th anniversary of the CW attack on Halabja in Kurdish Iraq. Speaking are CBACI President Michael Moodie, former UNSCOM Deputy Executive Chairman Charles Duelfer, Professor Christine Gosden of the University of Liverpool, and former Halabja resident and agronomy professor at the University of Suleymania, Dr Hama Dostan, the author of *Like Black Wind* (1999), a novel about Halabja.

20 March In Kosovo, Yugoslav security forces in Vrtogos include chemical warheads in their shelling of the buffer-zone Albanian village of Muhovic, according to Albanian electronic media. The charge is next day denounced by the Yugoslav/Serb State Coordination Body for Southern Serbia as a lie aimed at destroying the peace process and normalization of relations.

20 March In Washington, the director of special projects in the OPCW Technical Secretariat, Serguei Batsanov, speaks on *The CWC: Issues for the First Review Conference* at a meeting organised by the Monterey Institute Center for Nonproliferation in its 2001 briefing series [see 13 Mar]. In comparing the CWC review conference with other such conferences, Batsanov notes that the CWC is the first disarmament treaty with its own "complete implementing mechanism", as opposed to the BWC or the IAEA's task to oversee only some of the NPT. He predicts that while other review conferences have had preparatory committees, the OPCW is unlikely to follow this example, instead setting up a group under the umbrella of the Executive Council. Batsanov expects that, rather than attempting an article-by-article read-through of the CWC, the review conference will identify a number of key areas. His suggestions are: the application of international supervision to past and current chemical weapons programmes; the destruction of chemical weapons; the non-proliferation of chemical weapons; the effectiveness of the verification regime; challenge inspections; national implementation; and scientific and technological developments.

20–22 March In Washington, there is the first of the statutory trial visits [see 29 Nov 99 President Clinton] to assess the national security implications of the on-site measures being considered for the BWC Protocol. The trial takes place at the Armed Forces Institute of Pathology. The institute is described by a “senior defense official” as “a small facility that currently submits annual reports under BWC-related ‘confidence-building measures.’” Defense Department officials form two teams, one playing the role of an OPBW visit team exercising “notional protocol provisions” and the other acting as the host team while also assessing whether “the notional provisions adequately allowed for the protection of national security information.” According to Seth Brugger writing in *Arms Control Today*, the Pentagon’s assessment of the trial will be factored into a report to Congress assessing the need for visits and investigations under the Protocol. Brugger also says that the Defense Department is considering conducting another trial later this year.

20–29 March In Budapest, there is a second NATO Advanced Studies Institute on the BWC Protocol [see 6-16 Jul 97]. The subject of the 10-day meeting is *Scientific and Technological Aspects of the Implementation of the Protocol to the Biological and Toxin Weapons Convention*. The ASI is co-directed by Professor Gyorgy Granasztói (Teleki Laszlo Institute) and Professor Malcolm Dando (University of Bradford). Attending are 76 participants from 25 NATO, NATO Partner and non-NATO countries. An exercise, simulating the first session of the projected OPBW Conference of the States Parties, is organized by one of the lecturers, Marie Chevrier of the University of Texas at Dallas. There are 18 lecturers from 9 countries (France, Germany, Hungary, Netherlands, Poland, Romania, South Africa, UK and USA). In addition, BWC Ad Hoc Group chairman Tibor Tóth addresses the opening of the meeting and speaks again on the final day to inform participants that he has just completed his “composite text” of the Protocol which will be delivered in the capital cities of AHG participants the following day. The ASI had provided opportunity for some final consultations on the text.

21 March In the US House of Representatives, the Armed Services Committee conducts a hearing on the report of the US Commission on National Security/21st Century, otherwise known as the Hart-Rudman commission after its chairmen [see 31 Jan]. Testifying before the committee are Gary Hart a co-chairman of the commission, Newt Gingrich who was a member of the commission, John Hamre [see 30 Sep 99], now the president of the Center for Strategic and International Studies and William Kristol, the chairman of the Project for the New American Century. Hamre observes in his prepared statement: “Second, the greatest threat we face, I believe, comes from the proliferation of dangerous materials and knowledge amassed during the Cold War. The Soviet Union built massive inventories of chemical, biological and nuclear weapons, and created an extensive intellectual-industrial complex to manufacture these terrible weapons. As the Soviet Union collapsed, these dangerous weapons and technologies began to proliferate to other countries and potentially to international terrorist organizations. The growing technological sophistication of scientific and industrial establishments around the world bring chemical and biological weapons within the reach of virtually any country with a competent university. We now think some 14-15 countries harbor chemical or biological weapons. And with the proliferation of inventories comes the risk that these terrible devices will fall into the hands of terrorist organizations.”

22 March In Viet Nam, Vice President Nguyen Thi Binh, speaking in Hanoi at the launch of a campaign for support of disabled children, calls on international organizations and individuals to help children who are victims of Agent Orange. He is

joined by Nguyen Trong Nhan, the president of Vietnam Red Cross, who estimates that approximately one million Vietnamese were affected by Agent Orange, among that number being 150,000 children with birth defects. The campaign launched today intends to garner financial aid, initially for a period of five years, and is supported by national bodies such as the Fund for Vietnamese Children and the Agent Orange Victims Fund.

22 March In Virginia, Hadron Inc announces that a subsidiary has been awarded a one-year \$2.6 million contract by the US Army Medical Research and Materiel Command to study and develop new medical defences against anthrax. The subsidiary is Advanced Biosystems Inc, whose president is Dr Ken Alibek.

25 March In Egypt, the director of the Department of Chemical Warfare, Lt-Gen Muhammad Hilal, tells the Cairo *Al-Wafd* that there have been no cases of unexplained illnesses among Egyptian veterans of the Kuwait Liberation War.

27 March From the US Defense Department, the Office of the Special Assistant for Gulf war Illnesses, Medical Readiness and Military Deployments publishes three new papers. One is an updated version of the information paper, *The Fox NBC Reconnaissance Vehicle*. The other two are interim case narratives — *Chemical Warfare Agent Release at Muhammadiyah Ammunition Storage Site* [see 9 Jul 96] and *The Gulf War Air Campaign – Possible Chemical Warfare Agent Release at Al Muthanna, February 8, 1991* [see 9 Jul 96].

27 March In Atlanta, Georgia, at a Sam Nunn Policy Forum at Georgia Tech, the general director of the Russian State Research Centre of Virology and Biotechnology (VECTOR) [see 13 Oct 00], Dr Lev Sandakhchiev, presents a multimillion-dollar plan, developed with support from the US National Institutes of Health, to transform VECTOR into an International Center for the Study of Emerging and Re-emerging Infectious Diseases (INCERID).

27 March In Albuquerque, New Mexico, the Nuclear Security Decisionmakers’ Forum hears that the United States should develop a new class of small satellite-guided nuclear weapon so as to be able to deter use of weapons of mass destruction by countries such as Iraq. This proposal is made by the director of Sandia National Laboratories, C Paul Robinson, summarizing an argument which he had earlier presented in a “white paper” posted on the Sandia website. The paper addresses “how nuclear deterrence might be extended—not just to deter Russia—but how it might serve a continuing role in deterring wider acts of aggression from any corner of the world, including deterring the use of nuclear, chemical or biological weapons.” In the paper, Robinson goes on to say: “I believe that we would desire primarily low-yield weapons with highly accurate delivery systems for deterrence in the non-Russian world. Here, I’m not talking about sub-kiloton weapons ..., but devices in the low-kiloton regime, in order to contemplate the destruction of some buried or hidden targets, while being mindful of the need to minimize collateral damage.”

28 March Iraq informs UN Secretary-General Kofi Annan that it plans to renovate the Foot and Mouth Disease Vaccine Institute at Daura, near Baghdad, because of the outbreak of the disease in neighbouring states. The Secretary-General is put on notice that he will be asked to approve the financing of the renovation under the UN oil-for-food programme, and he is warned “against attempts by the United States and the United Kingdom to obstruct this process”. In 1996, UNSCOM had overseen destruction of plant at the facility following the admis-

sion by Iraqi officials that it had been used for production of botulin toxin [see 22 Apr 99]. Further, UNSCOM had reported that the facility had also been used for research on candidate viral warfare agents, including infective haemorrhagic conjunctivitis. This history is subsequently rehearsed by the London *Sunday Times* in an article asserting that the renovation project is a ruse to rebuild bioweapons production capacity. Replying to a question in Parliament, Minister of State for Foreign and Commonwealth Affairs Brian Wilson responds as follows: "In the continuing absence of UN monitors, the United Kingdom has opposed this request for reactivation of a plant known to have been used for biological weapons production in the past."

28 March In Chechnya, Russian forces have been using banned weapons according to a report by Chechen Health Minister Umar Khambiyev posted on the website of the Kavkaz-Tsentr news agency. The report includes the following: "Along with ordinary weapons, the Russian armed forces have used weapons of mass destruction in the Chechen settlements. These weapons are banned by the Geneva conventions." The weapons mentioned in the report include surface-to-surface missiles and rockets with fragmentation warheads, vacuum bombs and landmines.

28 March In the US Defense Department, the Chairman of the Defense Science Board, William Schneider, transmits to the Principal Deputy Under Secretary of Defense (Acquisition, Technology & Logistics) the executive summary of the DSB 2000 Summer Study, *Protecting the Homeland*, describing the study as being "aimed at assisting the Department of Defense and the Intelligence Community in defining their roles in protecting the nation from unconventional attacks on the United States". The study is in four volumes documenting the work of four DSB Task Forces, including one on *Defense Against Biological Weapons* that had been led by George Poste [see 28-29 Nov 00]. The DSB is planning additional studies for the series, including one on *Defense Against Chemical Warfare Attack* [see 6 Mar] and a further study of BW issues. The conclusions of the initial BW study, which had leaked to the press six months previously, are reported in this executive summary as follows: "The task force on Defense against Biological Warfare concluded that the United States is ill-prepared for a BW attack, asserting that 100 to 1,000 cases of one of these diseases in a single city would tax the nation's health care system. The task force paints a grim picture of the effectiveness of biological warfare. For example, an attack on a city with 100 kilograms of bioagent would kill one to three million people, twice the number of fatalities that would result from a one megaton nuclear weapon. Moreover, because of the commercial nature of the ingredients needed to manufacture viruses and pathogens, biological weapons are harder for governments and monitoring regimes to track and control than nuclear weapons development. This task force recommends that the Defense Department develop a database of biological weapons, a computer chip to automatically diagnose the diseases in patients, and a computer network that will rapidly warn health care centers about man-made outbreaks. ... At the same time, the task force is recommending that the Pentagon invest heavily in research and development for bioagent drugs and vaccines, and work with the Food and Drug Administration to accelerate the review process. It also recommends the Pentagon fund a \$50 million to \$100 million manufacturing facility for vaccines or after-exposure drugs in order to speed production. To provide oversight for all of the development, the task force then recommends the establishment of a new organization that it calls the Joint BioDefense Organization (JBDO). The JBDO would direct the military response to a bioagent outbreak and would coordinate efforts with the civilian sector and media, and would report di-

rectly to the president and the defense secretary through the chairman of the Joint Chiefs of Staff. The task force estimates that the above recommendations would require the investment of \$3.2B over the FY2002 Future Years Defense Program."

29 March In Germany, the annual report of the Verfassungsschutz (the domestic security service) is published. It states that, during 2000, China, India, Iran, Iraq, Libya, Pakistan and Syria all sought to buy German technology or know-how for weapons of mass destruction. Alongside these states, the report also includes North Korea and Sudan in its listing of "proliferation-relevant" countries.

29 March In Geneva, a symposium on *Facing the Challenge of Disease in the 21st Century* is co-hosted by the Quaker United Nations Office and the Bradford University Department of Peace Studies. Dr Guenaël Rodier of the World Health Organization speaks on "Preventing disease: the challenge for WHO"; Professor Graham Pearson speaks on "Preventing deliberate disease: the Protocol contribution"; and there is a message from the Surgeon-General of the South African National Defence Forces, Lt-Gen Jansen van Rensburg, on "Countering disease in Africa. The general theme is the complementary nature of the projected BWC Protocol and the work of WHO in combating disease, and the opportunities and benefits that such cooperation could bring to all countries, whatever their state of development.

Chairing the meeting is Ambassador Tibor Tóth, the chairman of the BWC Ad Hoc Group. He says that, next day, he will be submitting to delegations, via their capitals and then directly, a "composite text" for the BWC Protocol. He had announced this in Budapest earlier in the day when speaking at the close of the NATO Advanced Studies Institute on the Protocol [see 20-29 Mar].

29 March In the UK, the government publishes a consultation paper on draft legislation, *The Export Control and Non-Proliferation Bill*. The bill is based on the 1998 *Strategic Export Controls White Paper* [see 1 Jul 98] which responded to the recommendation of the Scott Inquiry [see 15 Feb 96] that a comprehensive review of the primary legislation governing export controls was needed and also on the reports of the Quadripartite Select Committee [see 14 Dec 00]. The bill would replace the export control provisions of the 1939 *Import, Export and Customs Powers (Defence) Act*.

One of the consultation paper's six "key objectives" is "to prohibit involvement in developing, producing or using weapons of mass destruction or in military preparations or preparations of a military nature intending to use such weapons." Provisions to implement this objective are not included in the published draft bill but will be included in the version to be introduced to Parliament. As recommended in the 1998 White Paper, the bill would add to the provisions of the 1996 Chemical Weapons Act by making it an offence for anyone in the UK or a UK person abroad to aid, abet, counsel or procure a foreigner overseas to develop, produce or use a chemical weapon. The draft bill also incorporates the suggestion in the White Paper that it be made an offence for anyone in the UK or a UK person abroad to aid, abet, counsel or procure a foreigner overseas to engage in military preparations or preparations of a military nature, intending to use a chemical weapon. With respect to biological weapons, the bill would introduce measures equivalent to those already in the 1996 Chemical Weapons Act, together with these two additional offences. In addition, the bill would also allow the government to impose controls on the transfer of technology by intangible means and on the provision of technical services. The bill would thereby serve to implement into UK

law the provisions of European Council Regulation 1334/2000 and EU Joint Action 2000/401/CFSP [see 22 Jun 00].

The consultation period is due to end on 24 May.

29 March In Washington, German Chancellor Gerhard Schroeder and President Bush issue a joint statement following their talks. The statement includes the following on weapons of mass destruction: "Together we are resolved to undertake new efforts in countering the proliferation of weapons of mass destruction (WMD) and increasingly sophisticated missiles for their delivery. ... We will work together toward a post-Cold War strategy that increases our common security and that encompasses the appropriate mix of offensive and defensive systems, and that continues nuclear arms reductions and strengthens WMD and missile proliferation controls as well as counter-proliferation measures." Schroeder reinforces these comments in an article in *Die Zeit* a few days later, particularly in relation to Russia: "We must make new efforts to prevent the spread of weapons of mass destruction and the increasingly more mature delivery systems. Russia itself faces difficult problems due to the residual nuclear, biological and chemical contamination on its territory and in the adjoining waters. Solutions must also be found for this, for the future of our common European house."

29 March In the US Senate, John Bolton, President Bush's nominee for the post of Under Secretary of State for Arms Control and International Security Affairs [see 21 Feb], appears before the Foreign Relations Committee. In his prepared statement, he says the following: "Multilateral diplomacy and managing international organizations play an increasing role in arms control, and several existing problems require attention. For example, the Organization for the Prohibition of Chemical Weapons (OPCW), is experiencing a series of financial and management difficulties that threaten the very integrity of the Chemical Weapons Convention. If confirmed, I would work, as a priority work, closely with Congress and like-minded countries to try to resolve these issues and help the OPCW play its role in helping to ensure a world free of chemical weapons."

Later, in answer to a question from Committee Chairman Jesse Helms, Bolton says: "I think that the effective implementation of the Chemical Weapons Convention requires a technical secretariat that's both effective and perceived not to be out for national agendas, and not out for agendas of the staff, or particular member states. And as I have come back into this question of the OPCW, ... it's become pretty clear that for a variety of reasons, some of which are nobody's fault, some of which I think are, unfortunately, this country's fault, that implementation of the creation and formation of the technical secretariat has not gone well, and that in the next year, in particular, we face a number of potential, very difficult bumps in the road, in terms of getting this new organization off to a functioning start. ... As a supporter of this convention, I personally think that if it were to collapse in its operational stages, it would not only threaten the integrity of the CWC itself, it would make more difficult any other subsequent arms control agreement."

On 26 April, the Committee votes 10-8 to approve the nomination, which now passes to the full Senate.

29 March–1 April In Oxford, England, a Halabja Post-Graduate Medical Institute (HMI) seminar is hosted by the Washington Kurdish Institute and Professor Christine Gosden [see 16 Mar] of the University of Liverpool. Participating are representatives of the regional health ministries in Iraqi Kurdistan, deans of three regional medical colleges, doctors, and representatives of non-governmental organizations providing health care in northern Iraq. A summary of the meeting is subsequently published by the Washington Kurdish Institute.

There are presentations of clinical video studies and data collected in the HMI medical survey of 2000 households (one per cent) throughout Iraqi Kurdistan [see 27 Nov 00]. The high incidence that has been found of cancers, cardiopulmonary disease, congenital anomalies and other major medical disorders is assessed in relation to regional demographic structures. The seminar learns that HMI researchers have identified 250 villages and towns in northern Iraq, and 31 other uninhabited strategic areas, that appear to have been attacked with weapons of mass destruction by the Iraqi regime in 1987 and 1988. The preliminary evidence suggests that, in addition to chemical weapons including nerve agents, both biological and radiological weapons may also have been used, apparently with genocidal intent. Participants discuss the preparation of papers setting out the HMI observations for submission to peer-reviewed scientific journals.

The preliminary survey data and clinical studies are regarded by participants as a basis for medical treatment, research and environmental-safety pilot programmes. Participants consider diagnostic and treatment capacities in relation to the UN Oil-for-Food programme and other available medical and health resources. Discussion of programme development focuses on priority areas, these being identified as cancer; maternal and child health, including congenital abnormalities; and general medical disorders. Working partnerships between the ministries of health, the medical colleges, NGOs and local doctors are being strengthened better to secure international support and to implement programmes at the primary, secondary and tertiary care levels effectively.

Participants review the ongoing treatment and research programs supported by HMI for survivors of unconventional weapons attacks in Iraqi Kurdistan. In order further to address urgent medical needs in Halabja and elsewhere, participants agree to support:

- Establishment of a community centre to assist disabled persons in Halabja.
 - Continued employment of three medical specialists in the Halabja hospital.
 - Providing an anaesthesia machine, slit lamp (for ophthalmology), coronary care and other medical supplies for Halabja hospital.
 - Providing a functional bronchoscope for physicians in Erbil.
- Participants emphasize the urgent necessity of further measures building upon initial steps, given the scale of health problems facing a civilian population that has been exposed in varying degrees to weapons of mass destruction. There is agreement that urgent appeals should be made to the international community to support continued development of medical treatment, research and environmental-safety programmes throughout the region.

30 March BWC Ad Hoc Group Chairman Tibor Tóth releases his long-awaited "composite text" of the BWC Protocol [see 29 Mar]. The text is delivered to governments by Hungarian ambassadors in capitals of AHG participants. At 1600 hrs CET the text is also released to delegations in Geneva. The text reportedly elaborates upon the "building blocks" [see 23 Feb] which Tóth had distributed to delegations at the last two Ad Hoc Group sessions.

In a video statement posted on the website of the University of Bradford Department of Peace Studies, Tóth says: "It is my hope and belief that all delegations will recognize that the composite text is based on language that has already been agreed by consensus in the negotiations to date. It is my hope and belief equally that all delegations will recognize that the suggested compromise solutions on unresolved issues are based on a carefully judged balance of the views of all delegations. In doing so the text I submitted is, in my view, one that intends to

achieve the mandate of the Ad Hoc Group and to strengthen all the provisions of the Convention, thus maintaining the integrity and overall 'meaningfulness' of the Protocol." He goes on to say: "When considering this compromise text, I would like to request each and every State Party not only to focus on what it has not gained, but also what it has received in the overall process of give and take. I understand that the flexibility required in asking any State Party to consider this text as the basis for final agreement is great, but such flexibility is not required only from one country, but from every single delegation participating in the negotiations in Geneva."

The text itself is 210 pages long, with 30 main articles, three annexes and nine appendices. The text will be formally introduced at the forthcoming twenty-third session of the Ad Hoc Group in Geneva.

30 March In London, the UK Foreign and Commonwealth Office hosts a session of the HSP London CBW Seminar [see 21 Jun 00] at which the topic for discussion is the impending 5th BWC Review Conference. The main presentation is by Nicholas Sims of the London School of Economics. It is later published by the Bradford University Department of Peace Studies as the second paper in its new occasional paper series *Review Conference Papers* under the title "The functions of the BTWC Review Conferences: maximising the benefits from the Fifth Review Conference".

31 March In Burundi, chemical weapons are reportedly used by government forces against rebels in rural Bujumbura, and again two days later, so the Rome-based Missionary Service News Agency reports, citing an unidentified "source of the Burundian civil society contacted in Nairobi". According to that anonymous source, the chemicals are disseminated from truck-mounted rocket launchers using missiles that had arrived in Burundi during the early hours of the previous day by aircraft from Libya.

31 March In Cuba, Vice President Mose Myar tells a visiting group of Iranian parliamentarians that Cuba is keen to upgrade its cooperation with Iran in the field of biotechnology. This cooperation had begun six years previously, particularly in the field of medical biotechnology.

3 April In Colombia, a people's suit (as provided for in the Constitution of 1991) is brought before the Court of Cundinamarca by two environmental lawyers, Claudia Sampedro Torres and Hector Alfredo Suarez Mejia, seeking suspension of the "fumigation" — spraying with biocide — of illegal crops such as coca on the grounds that fumigation, which has been practised since 1994, without an environmental management plan is a violation of the Constitution and of the law. About 250,000 hectares of illegal crops have been sprayed thus far, mostly with glyphosate, and Plan Colombia [see 1 Sep 00] envisages an additional 120,000 hectares. A recent report from the Office of the Attorney General discloses an episode in which fumigation had affected five farms even though they were at least 2.5 kilometres from illegal crops. In mid-March, the governors of four provinces in the south of country had visited Washington, DC, to ask policymakers there to seek to stop the fumigation in favour of manual crop-destruction combined with development programmes that offer farmers reasonable alternatives to drug-plant cultivation.

3–4 April In Washington, the US Defense Intelligence Agency and the National Military Intelligence Association join in convening *National Intelligence Symposium 2001: Asymmetric Threat*. It is classified SECRET, US ONLY. The publicity for the symposium had stated that "the high priority topics that consti-

tute the Asymmetric Threat to the United States include critical infrastructure protection and information assurance, information warfare, terrorism, weapons of mass destruction, the foreign intelligence threat, the threat to spaceborne assets, and foreign concealment and deception".

3–6 April In The Hague, the OPCW Executive Council convenes for its twenty-fourth formal session. [For further detail, see *Progress in The Hague* above]

4 April In Moscow, at an extraordinary meeting of shareholders in the Russian joint-stock company Biopreparat, general director Yuriy Kalinin [see 13 Oct 00] is voted out of office. He is replaced by Ramil Khabriyev, who is the head of the Department for Quality Control of Drugs and Medical Technology in the Russian Ministry of Health. Reporting this, the Moscow *Kommersant* notes that the All-Union Industrial Association Biopreparat had been created in 1937, and that it became a joint-stock company in 1994.

4 April In Bosnia-Herzegovina, chemical weapons, as well as conventional weapons of all sorts, are available for purchase from arms dealers based in the Serb Republic, so it is reported on the Madrid *El Mundo* website with attribution to television journalists who had posed as intermediaries for a Latin American guerrilla movement. A display of the merchandise had included what the dealers described thus: "Look at these cartridges. They're chemical cartridges. It's banned ammunition, but we can get hold of it for you."

4 April In Pretoria High Court, where the trial of Brig Dr Wouter Basson continues, the defence team begins its argument for dismissal of the human-rights-related charges. [For further detail, see *Proceedings in South Africa*, above]

4 April In California, the Centre for Nonproliferation Studies of the Monterey Institute of International Studies publishes the Spring 2001 issue of *The Nonproliferation Review*. This contains a special section entitled "New approaches to compliance with arms control and nonproliferation agreements". Its papers had originated in presentations made at a CNS-CBACI conference [see 9–10 Jul 98]. Among them are three detailed case-studies of episodes of CBW-treaty noncompliance, real or supposed. They are the Yellow Rain allegations, the chemical warfare of the Iraq-Iran War [see also 7 Mar], and post-1975 Soviet/Russian BW programmes. [Note: The second of these studies is striking for its assertion that chemical weapons were used repeatedly, not only by Iraq, but also by Iran. In contrast to much else in his paper, the author has chosen not to document this statement, though he does cite, via a secondary source, the report of an investigation by the UN Secretary-General [see 25 Apr 88] which found that 111 Iraqi military personnel present in a Baghdad hospital on 8–9 April 1988 had certainly been affected by mustard gas. However, that report also states that it "was not possible to make an independent determination" of how the soldiers came to be exposed to the mustard gas. The two other case studies are meticulous in their citation of authorities on contentious matters.]

The USSR/Russia BW case-study, by CBACI President Michael Moodie, concludes thus: "The United States, and the international community as a whole, has devoted far more attention to negotiating arms control agreements than to implementing and enforcing them. The impact of how those agreements are implemented and enforced will only be felt over time as results accumulate. Prudence suggests that some greater attention and evaluation should be given to the potential consequences of noncompliance. Doing so may prevent the worst."

5 April In Russia, Prime Minister M Kasyanov signs Government Order No 484-r, which, in accordance with the federal law *On Social Protection for Citizens Engaged in Working with Chemical Weapons* [see 7 Nov 00], sets out the list of toxic chemicals that are to be classified as chemical weapons for purposes of “granting privileges and compensation to citizens engaged in working with chemical weapons, as well as establishing a link between the illnesses of citizens and said jobs, regardless of the time said work was conducted”. The list comprises seven chemicals. It also indicates the “year of termination of production” of each chemical and whether the chemical is or is not still stockpiled. The list is as follows: sarin (1982), soman (1987), O-isobutyl 2-diethylaminoethyl methylphosphonothiolate (1986), which the list calls “VX”, mustard gas (1957), lewisite (1946), phosgene (1946) and hydrogen cyanide (1946). Stockpiles still exist of all but hydrogen cyanide.

5 April In Canada, the House of Commons Agriculture Committee learns from the Executive Vice President of the Canadian Food Inspection Agency, Andre Gravel, that the RCMP (the Mounties) and the Canadian Security Intelligence Service are assessing the threat of bioterrorists bringing foot-and mouth disease into the country. The committee is told about the precautions being taken to ensure that the disease does not spread in from the United Kingdom, where it is currently devastating both agriculture and tourism. For example, two days previously a British ship had been expelled from a port in Quebec after inspectors had discovered dirt on the tyres of military vehicles bound for Alberta.

6 April In Russia the Munitions Agency announces that construction of the chemdemil facilities at Gornyy [see 2 Feb] has resumed and that Germany has shipped equipment for processing CW agents there.

6 April In Washington, President Bush announces his intention to nominate Douglas Feith [see 21 Mar 96, 9 Sep 96 and 9 Apr 97] to serve as Under Secretary of Defense for Policy. Feith had previously served in the Reagan Administration as Deputy Assistant Secretary of Defense for Negotiations Policy and was also Special Counsel to Assistant Secretary of Defense Richard Perle.

8 April In Namibia, President Sam Nujoma reportedly states that Americans had created HIV/AIDS as part of the US biological-warfare programme at the time of the Vietnam War. The US embassy in Windhoek subsequently makes no official comment on the statement, but is reported to be interested in having “correct information on scientifically better grounded theories about the origin of the deadly virus and disease provided to the President”.

8 April In Britain, the *Sunday Express* suggests that the current outbreak of foot-and-mouth disease among the country's livestock might have been “an act of sabotage by a rogue worker”, possibly using a “test tube containing the foot-and-mouth virus” that was said to have gone missing from Porton Down two months before the outbreak was first reported. The newspaper quotes an unidentified “senior military source close to Porton Down” as saying: “A phial appears to have gone missing from one of the labs following a routine audit last year. Ministry officials were informed immediately and an investigation was launched by Special Branch and then by MI5, who are interested in the activities of animal rights protestors”. In response to a parliamentary question about the allegation, junior defence minister Lewis Moonie, responds as follows: “There have been no losses of viruses from the Chemical and Biological Defence Sector of DERA at Porton Down in the past year.

... No foot and mouth viruses have been stolen from CBD Porton Down, nor have samples of foot and mouth virus been held at CBD Porton Down in the past year.”

9 April The UK Defence Ministry, addressing concerns expressed by former participants in the Service Volunteer Programme at Porton Down, tells the House of Commons that it has now sought advice from the Medical Research Council on the feasibility of conducting an epidemiological study to determine whether volunteers had suffered unusual mortality or illness [see 27 Feb].

10 April In Viet Nam, the Hanoi *Quan Doi Nhan Dan*, which is the daily newspaper of the Vietnamese People's Army, reports that since December 1998 “there have been seven cases of evil people scattering poisons in 13 schools in Dac Lac Province” in the central highlands, affecting 547 students and teachers. The army had been sent into the region in February, following unrest among the region's mainly Christian ethnic minorities.

10 April In China, 72 poison-gas shells in five varieties were found in early March during an excavation at Huiyang in Henan Province, so Xinhua reports, describing the munitions as having been abandoned by the Imperial Japanese Army, which had occupied Huiyang from September 1938 until August 1945. The news agency also reports that workmen who had dug up the shell said that a “stinging, white smoke” had spewed from the site.

10 April In India, the Chennai *Hindu* comments on recent the talks between External Affairs and Defence Minister Jaswant Singh and visiting officials of the new US administration. “The Indian side felt that the possession of nuclear weapons alone did not necessarily threaten a nuclear war. Poor governance, political instability at home and undue external dependence could also encourage use of nuclear arms. In fact, the clash between two stable nuclear powers, the former Soviet Union and China, in 1969 along the Ussuri river did not threaten a nuclear war. The remedy for preventing a nuclear clash in South Asia therefore does not lie in the Kashmir issue, but on ensuring that Pakistan emerged as a nation-state at peace with itself. India and the US, in fact, had a common agenda in encouraging democracy and economic well-being in Pakistan. A moderate democratic Islamic state was necessary and could emerge in Pakistan, if Islamabad, in its self-interest, reined in terrorism. India was also not averse to Pakistan's positive economic contribution to the South Asian Association of Regional Cooperation. ... On weapons of mass destruction, India's view was that chemical and biological warfare was a bigger danger than nuclear weapons. These dangers have been enhanced because the procurement of these weapons by international terrorists is easier. Both countries have been concerned at the developments in China. Economic engagement should deepen but Beijing's evolving military capability also needs to be actively monitored.”

10 April From Asmara, the Sudan People's Liberation Army issues a statement denouncing “the close cooperation between the Khartoum and Baghdad regimes in developing Sudan's military industry, including chemical weapons”. The statement, signed by SPLA spokesman Yasser Arman, attributes its information to “SPLA sources within the Sudanese armed forces”, but presents no further detail on the alleged chemical weapons.

10 April The British government expresses support for the composite text of the projected BWC Protocol that has recently been produced by BWC Ad Hoc Group chairman Tibor Tóth [see 30 Mar]. Responding to a parliamentary question from the

Liberal Democrat foreign affairs and defence spokesman, Menzies Campbell, the cognizant Foreign & Commonwealth Office minister, Brian Wilson, writes: "We welcome the appearance of the text and are currently assessing this [*sic*] overall content. A successful outcome [to the Protocol negotiation] by the time of the BWC Review Conference remains a possibility but will depend upon the reaction to the text from all countries involved over the coming months. An effective BWC Protocol remains an important arms control objective for the United Kingdom as it will help fill the last remaining gap in treaty provisions designed to stem the proliferation of WMD".

10 April From New York, Russian emigré Lev Navrozov publishes an essay on NewsMax.com about research in China on biological weapons. He speculates that an important part of this work is 'National 863 Project', described in a Chinese publication as seeking new advanced warfare technologies and as having been approved by Deng Xiao Ping in March 1986. He notes a *New York Times* report from China in October 2000 that had expressly attributed the country's progress in genetically modified foodcrops to the 863 Project.

11 April In Japan, stronger steps to cope with possible bioterrorist attacks are advocated in a report to the Defence Agency from its Director-General's advisory panel. According to Kyodo, the report states that cheap easily produced biological weapons are spreading worldwide and are being acquired by terrorists, constituting a new threat. The report identifies 20 varieties of bacterium and virus, including smallpox virus, as potential bioweapons. The Defence Agency is planning to expand the education and training of the anti-CW units of the Self Defence Forces, to expand research, and to increase supplies of anti-BW equipment [see also 13 Dec 00]. The report of the advisory panel concludes thus: "Establishing a system concerning measures to be taken on biological weapons is an important government-wide issue. The current infrastructure covering personnel resources, information, facilities, and equipment of the Defense Agency and Self-Defense Forces relative to biological-weapons measures is fragile, and a considerable amount of time will be required to build an adequate system."

11 April Russian foreign minister Ivan Ivanov visits OPCW headquarters while on an official visit to the Netherlands. After holding talks with Director-General José Bustani, he makes a brief statement to the press, in which he expands on Russian plans to adapt its chemdemil programme: "... we are adjusting our federal targeted programme of chemical disarmament. We are elaborating on proposals aimed at reducing costs and complying with the deadlines for the destruction of CW stockpiles in my country. We are planning to considerably increase the budget and budget allocations to this end." However, he goes on to highlight the problems, particularly financial, which Russia has encountered and states that: "We believe that we can expect additional assistance in chemical disarmament given the assurances of the willingness to help us which we received at the stage when Russia was still pondering on its capabilities and was making the decision on whether or not to participate in the Convention." Ivanov also emphasizes that "important for Russia is the support for Russia's conversion requests aimed at re-orienting facilities to peaceful purposes. We will rely on such support in the future in order to preserve the economic capability of my country."

12 April From Manchester University, further findings [see 1 Jul 00] are published from research led by Professor Nicola Cherry into illnesses among UK veterans of the Gulf War [see 5 Mar]. There is no evidence of any illness unique to Gulf War veterans, but the findings do include observation of association

between reported ill health and multiple vaccinations or handling of pesticides. In a statement commenting on the publication (two papers in *Occupational and Environmental Medicine*), the Ministry of Defence says: "Research is currently underway which covers all the main points raised by the Manchester work. The King's Medical School team [see 18 May 00] have completed: a neuromuscular study of Gulf veterans, immunological work on blood samples taken from Gulf veterans (testing the hypothesis that multiple vaccinations may have triggered physiological changes) and a clinical follow-up to their questionnaire-based earlier work. The Ministry ... expects papers on all this work to be published this year. In addition, the Ministry of Defence is already undertaking research at CBD Porton Down into the health effects of possible interactions between all of the vaccines in the 1990/91 immunization programme, as well as pyridostigmine bromide (PB), the active ingredient in nerve agent pre-treatment tablets. The first phase of this work has been completed and showed no remarkable health effects from the combined administration of these immunizations and PB to guinea pigs. The current phase of this study is being conducted in a small primate, the marmoset, using a complex experimental design. a number of sensitive indices will be monitored for eighteen months following the co-administration of the ten vaccines and PB. These studies are expected to be completed in mid 2003.

12 April From Dallas, Dr Robert Haley [see 21 Jan 97 and 16 Jun 99] of the University of Texas Southwestern Medical Center defends, in a letter now published by *Nature*, the quality of his work on Gulf War Syndrome. The findings of his team had, he wrote, "passed rigorous peer review before publication in respected scientific journals". It was this, "in the politically charged environment of Gulf War research", that mattered, not the fact that the work had been supported by the Congress [see 19 Oct 00] and by other "non-peer-reviewed grant funds" outside the channels of official government support that had spurned it. He draws particular attention to the articles he has published "establishing that there is a new syndrome with three variants in Gulf War veterans of a naval reserve battalion".

13 April In France, there is an emergency evacuation of people living in the vicinity of an ammunition depot in the village of Vimy near Arras in Flanders. Some 12,500 people have been instructed to leave their homes and to stay away for 10 days while old munitions, including phosgene and mustard gas projectiles, are taken away for destruction at Suippes military camp, east of Paris in the Marne. The Vimy depot [see 12 Feb 98] reportedly contains around 173 tonnes of munitions, including 16,000 shells and bombs which had been uncovered in the surrounding Pas-de-Calais region after the first and second world wars. A recent survey had found some of the munitions to be in an alarming state of disrepair. On 15 April, one phosgene-filled shell is noticed to be leaking, but is quickly dealt with by army experts. The same day, French Prime Minister Lionel Jospin visits Vimy as army teams prepare to move the munitions to Suippes during the night. The convoy, consisting of nearly 60 vehicles carrying 40 tons of munitions and escorted by around 475 police and four helicopters, arrives on 16 April at Suippes, 240 km to the southeast. The munitions are to be stored in a former nuclear missile silo, where they will await destruction. It is envisaged that there may have to be a second such convoy to take away any remaining chemical munitions that may still be in the Vimy depot. However, France currently lacks a facility at which the munitions can be destroyed [see 12 Feb 98].

14 April In New York the UN Secretary-General's spokesman, Fred Eckhard, confirms that the UN has postponed its

projected second round of high-level talks with Iraq [see 26-27 Feb] because members of the Security Council "are not expected to complete their policy reviews on Iraq by the end of May".

17 April In Washington, a meeting on *Bioterrorism: Legal Initiatives for Prevention/Deterrence* is convened by the Monterey Institute Center for Nonproliferation Studies in its 2001 briefing series [see 20 Mar]. The meeting is addressed by Barry Kellman of DePaul University and Susan Spaulding from the National Commission on Terrorism [see 5 Jun 00]. In her presentation, Spaulding deals with four components of the legal aspect of bioterrorism, namely foreign intelligence, law enforcement, military and public health. In his presentation, Kellman proposes that "international legal initiatives must include the criminalization of the release of pathogens with intent to cause harm. In addition, the unauthorized possession, transnational movement of weapons agents, precursors and critical equipment as well as the provision of material, financial or intellectual support in the endeavor should be a crime. Regulation of pathogens and critical equipment should cover the 'registration' of the legal possession or use of regulated items, prohibit transfers to unregistered persons, and require the tagging or tracing of equipment." Kellman also suggests that there should be much closer cooperation between international organizations such as INTERPOL, the WHO and the World Customs Organization.

18-20 April At UN headquarters in New York, the Group of Governmental Experts to Prepare a United Nations Study on Disarmament and Non-Proliferation Education convenes for its first session. It is chaired by Ambassador Miguel Marín Bosch of Mexico. A further session is scheduled for 8-10 August, in Monterey, California.

19 April In Kazakhstan, the director general of the National Biotechnology Centre in Stepnogorsk, Gennadiy Lepeshkin, tells reporters that there are to be talks with visiting officials of the US administration during 21-23 April on the matter of further US aid for the dismantling and clean-up of the former bioweapons production facility at the Centre [see 12 Sep 00]. He says that about \$12 million are needed to complete the work. Three days later he talks with reporters about Vozrozhdeniye Island [see 7 Jul 99], which had been used as a BW test area during 1936-37 and 1954-92, saying that urgent safety checks are needed there.

19 April Iranian President Khatami and President Putin of Russia have reportedly agreed that Tehran would be informed of any development in Iraq that could threaten Iran. This is said to have happened in the course of their meeting in Moscow last month, during which they signed an "agreement of principles to expand co-operation between the two countries". President Khatami also appealed to President Putin to bring pressure on President Saddam Hussein of Iraq to renew international arms inspections.

19 April In Moscow, government preparedness for bioterrorism is the subject of an interview given by the Chief Public Health inspector of the Russian Federation, Gennadiy Grigoryevich Onishchenko, now published in the government daily newspaper *Rossiyskaya Gazeta*. He says that the Federal Antiterrorist Commission has established a working group on biological security issues, headed by the chairman of the government and that the Ministry of Health, with security departments, has prepared an "Antiterrorist activity concept for the federal organs of power in the area of environmental protection and public health". In addition, a centre for special laboratory diagnostics and treatment of dangerous and exotic infec-

tions has been created, based at the Defence Ministry's Microbiological Scientific Research Institute Center for Virology. Onishchenko says that: "Biological security is a component of our country's national security. The vaccines, antibiotics, and individual means of protection that we have at our disposal need to be replaced with newer ones. The funding of the program for combating biological terrorism is not up to the mark, however. Last year only R47 million instead of the promised R280.9 million was provided for its implementation. Russia today is among the most vulnerable countries as for as biological terrorism is concerned."

19 April In Yugoslavia, the French contingent of the NATO Kosovo Force uses tear gas to repel Serbs who are blocking roads in northern Kosovo in protest at the collection of excise taxes on goods vehicles coming from elsewhere in Yugoslavia.

19 April President Bush announces that the United States will sign the Stockholm Convention on Persistent Organic Chemicals [see 4-9 Dec 00] when it is opened for signature on 23 May.

19 April The US National Academy of Sciences Institute of Medicine publishes *Veterans and Agent Orange: Update 2000*, which is the third [see 11 Feb 99] of the statutory two-yearly updates of the report that, in accordance with Public Law 102-4, it had published in 1994, *Veterans and Agent Orange: Health Effects of Herbicides used in Vietnam* [see 27 Jul 93]. Among the conclusions of the new update is that acute myelogenous leukaemia in the children of veterans warrants inclusion in the category of health outcomes with limited/suggestive evidence of association with exposure to herbicides and/or the dioxin TCDD. The same conclusion had earlier been reached with regard to type 2 diabetes [see 11 Oct 00].

20-22 April In Albuquerque, New Mexico, Sandia National Laboratories hosts the eleventh annual international arms control conference, *Looking Ahead: New Horizons and Challenges in Arms Control*, chaired as usual by Dr James Brown. There are some 300 participants from 40 countries. There is a panel on "The century of biology: implications for global security and arms control".

20 April In The Hague, the Netherlands government hosts delegates from the BWC Ad Hoc Group for meetings regarding the Dutch bid for the seat of the OPCW. While in the city, the ambassadors also visit the OPCW and receive a briefing from the Director of Verification, Ron Manley.

21-27 April In Dubrovnik there is the seventh in the series of Chemical and Biological Medical Treatment Symposia [see 7-12 May 00] and the second CBMTS-Industry meeting [see 25-31 Oct 98], which are combined into the *World Congress on Chemical and Biological Terrorism*. The event attracts around 177 participants from 42 countries. There is also an exercise staged by units of the Croatian Interior Ministry and Army.

22 April Iraqi importers had some 6,000 contracts with overseas exporters entering the vetting procedures used in the UN oil-for-food programme during the 18-month period that ended in February, and 965 of these had been challenged, according to a confidential list reported in the London *Sunday Times*. The newspaper states that British and US officials had been responsible for most of the challenges, on grounds that the goods in question had possible application in weapons of mass destruction. As an example, the newspaper cites a £30,000 deal by Rohm & Haas France to supply Iraq with water-treatment chemicals, a deal that had been blocked because the chemi-

cals were “dual use”. The 6,000 contracts total about £10 billion. Egyptian companies account for the largest share (£1 billion) and Russian companies the second largest (£975 million). Of the £972 million for French exports, 117 contracts worth £200 million had been blocked, including a £0.9 million purchase of chemicals for insecticide and a £4.6 million sprinkler irrigation system. British and American companies account for £12 million and £8 million respectively.

22 April In Panama, the report is still being written on the investigation that the police had conducted in February to determine whether any hazards remained from the trials of chemical weapons conducted on San José Island during 1944-47 by Britain, Canada and the United States. The island is some 60 km off the Pacific coast of Panama and is now the location of an eco-tourist resort, Hacienda Del Mar, which had opened in November. An estimate made from US records that there could be as many as 3100 chemical bombs still left on San José [see 31 Jul 98] had caused Panama to declare to the OPCW the presence on its territory of abandoned chemical weapons [see 17 May 00]. The Foreign Affairs official who is handling the issue, Juan Mendez, is now quoted in *The Ottawa Citizen* as saying that, if Panama is able to produce firm evidence that weapons and chemicals still remain on the island, it will request the countries involved in the San José Project remove or properly dispose of the munitions: “We want to get hard evidence of chemical contamination – we don’t want to start crying wolf when we don’t have the wolf by the neck” [see also 29 Jan].

The newspaper quotes Francis Furtado, acting director of arms and proliferation control at the Canadian Department of National Defence, as saying: “At this stage we’re not willing to close the door on the idea that there may be weapons down there that are of Canadian origin. If further investigation on this determines there are Canadian weapons down there, we do have obligations under the treaty and of course we intend on fulfilling them.” The Department has reportedly provided the Panamanian authorities with technical information and pictures of the Canadian chemical munitions. In contrast, Mendez says of US cooperation: “The fact is they are not very forthcoming at all in providing us with information. We have had a great deal of trouble getting all the pertinent information from the US military.” The newspaper also quotes a Canadian Department of Foreign Affairs and International Trade spokesman as saying that the US, UK and Canada are currently pulling together information on the CW testing program and hope to have it ready “in the near future”.

The Ottawa newspaper also reports from its own inquiries that two types of Canadian chemical weapon had been tested during the San José Project, one being a Canadian design of mustard-gas cluster bomb.

22 April The *Los Angeles Times* publishes an op-ed piece by former UNSCOM Deputy Executive Chairman Charles Duelfer. This includes information augmenting the data on Iraqi CBW weapons in the big UNSCOM report of 25 January 1999, notably that Iraq had acknowledged using 101,000 chemical munitions in its war with Iran. Duelfer also writes of the long-term health and environmental consequences of the use of chemical weapons in northern Iraq, citing the work of Professor Christine Gosden of Liverpool University [see 29 Mar–1 Apr]: “Gosden’s early work is beginning to suggest that it may be possible to trace discernible genetic effects back to the specific agents that caused them. The evidence suggests that Saddam Hussein’s army used more than simply nerve agent and mustard gas against the Kurds.”

23 April In Manama, the EU-GCC Joint Ministerial Council concludes its eleventh session. The final communiqué says:

“The two sides called upon all members of the international community to cooperate to combat the proliferation of chemical, biological and nuclear weapons or systems for the delivery of such weapons”. Both sides also called for all countries that had not yet done so to sign and ratify the BWC and the CWC.

23 April In Geneva, the Ad Hoc Group of states parties to the BWC reconvenes for its twenty-third session [see 12 Feb]. Participating are 56 states parties (the same as those that participated in the twenty-second session, but with Bangladesh, Jordan, Slovenia, Thailand and Tunisia participating instead of Portugal, Singapore and Yemen) and two (Morocco and Egypt) of the three signatory states as in February. The session is due to end on 11 May.

AHG chairman Tibor Tóth formally introduces his “composite text” of the BWC Protocol [see 30 Mar] to the Group. Much of the three-week session is taken up by Toth explaining the compromises and balances which he has incorporated into the text. [For further detail, see *Progress in Geneva* above.]

23 April In Washington, Mikhail Gorbachev, in his capacity as president of Green Cross International, meets with President Bush, Vice President Cheney, Secretary of State Powell and National Security Adviser Rice. Following the meeting, Gorbachev is drafting a letter to Powell and Rice asking for US support in destroying the Russian CW stockpile. According to Global Green USA sources, the letter will request that the Defense Department release FY 1999 funding for the Shchuch’ye chemdemil facility and that the administration requests \$120 million in Cooperative Threat Reduction funds for Russian chemdemil in FY 2002.

23 April US State Department officials say that the new high-level review of US policy toward the Biological Weapons Convention [see 9 Mar] has not yet been concluded, according to *Chemical & Engineering News*, which also reports, however, that “the Bush Administration has rejected the latest draft of a verification protocol intended to strengthen the Convention”. The week previously, *The ASA Newsletter*, in an article by Barbara Hatch Rosenberg, reported that the review had been completed, adding that the “Bush Administration has not officially announced the results ... but there is abundant evidence that any Protocol, regardless of text, will be rejected”.

23–26 April In Geneva, to coincide with the start of the twenty-third session of the BWC Ad Hoc Group, there are several international civil-society meetings on issues relating to biological weapons.

On 23 April, the Sunshine Project co-sponsors a briefing for NGOs new to the field of biological weapons. The briefing covers the history of biological weapons, dual use technology, the BWC, BWC Protocol negotiations and threats to the scope of the BWC including anti-materiel weapons and the (proposed) use of pathogenic fungi in the war on drugs [see 28 Feb].

On 24 April, there is a lunchtime briefing for delegations, hosted by the Sunshine Project, which focuses on potential loopholes in the BWC, such as the use of biological agents to kill drug-producing plants, and warns that such loopholes could result in the scope of the Convention being threatened. During the briefing, AHG chairman Tibor Tóth is presented with a civil society resolution [see 21 Feb] calling on governments to urgently conclude the Protocol negotiations.

On 25 April, there is an EU-NGO lunchtime meeting hosted by the Swedish CD delegation (as current holder of the rotating six-month EU presidency). The meeting continues an initiative begun by the French EU presidency [see 20 Nov 00] and is attended by delegates from most EU member states and representatives of a number of NGOs. The meeting hears presenta-

tions from Jim Leonard (Federation of American Scientists), Graham Pearson (University of Bradford Department of Peace Studies), Daniel Feakes (Harvard Sussex Program), Oliver Meier (VERTIC) and Marie Chevrier (University of Texas at Dallas). The presentations are followed by discussion on the current status of negotiations within the Ad Hoc Group and on the contents of the recently released "composite text" of the BWC Protocol [see 30 Mar].

On 26 April, a further [see 16 Feb] briefing is provided by the Quaker United Nations Office in conjunction with the University of Bradford Department of Peace Studies. At the briefing two new papers in a new series, Review Conference, are presented: no 1, *The Fifth BTWC Review Conference: Opportunities and Challenges*, by Graham Pearson and no 2, *The Functions of the BTWC Review Conferences: Maximizing the Benefits from the Fifth Review Conference*, by Nicholas Sims [see 30 Mar]. Also presented is a new Evaluation Paper: no 20, *The Composite Protocol Text: An Effective Strengthening of the Biological and Toxin Weapons Convention*, by Graham Pearson, Malcolm Dando and Nicholas Sims. The briefing is attended by 55 people from 28 delegations.

Also on 26 April, UNIDIR and the Bradford University Department of Peace Studies host a meeting of the Geneva Forum on *An Analysis of the Chairman's Composite BTWC Protocol Text*. The meeting is chaired by the Director of UNIDIR, Patricia Lewis. Speaking to the meeting are Jim Leonard, Jenni Rissanen (Acronym Institute), Graham Pearson, Malcolm Dando (University of Bradford Department of Peace Studies) and Marie Chevrier. The meeting is attended by around 100 people, both Ad Hoc Group delegates and representatives of NGOs.

The London-based Acronym Institute publishes on its website dispatches about the AHG proceedings written by Jenni Rissanen, its researcher based in Geneva.

24 April In France, Defence Minister Alain Richard and Health Minister Bernard Kouchner announce a series of decisions concerning the health of French veterans of the Gulf and Balkans wars. The decisions include the launching of an exhaustive inquiry into health status of all of the 25,000 Gulf war veterans. This is in response to the recommendations of a report, published today, from the working group established by the two ministries last October for the purpose of analysing health data on those veterans. The doctor who headed the study, Roger Salamon of Bordeaux University notes that French veterans showed fewer signs of illness linked to their Gulf War service than US or UK counterparts, probably because they were subjected to fewer vaccinations. All three armies used pyridostigmine bromide to protect troops against chemical attack, although the French used less than the US or UK. The full study of all veterans will take up to three years to be completed.

24–25 April In Washington, Green Cross International holds its 7th Annual Legacy Forum, *Towards a Sustainable and Secure World: Advancing Russian and US Initiatives in Control of Weapons of Mass Destruction*. The second day of the conference concentrates on CW arms control and demilitarization. There are panels on "the Chemical Weapons Convention: Problems and Prospects" and "Russian and American Chemical Weapons Destruction". In addition, there is also a keynote presentation by OPCW Director of Verification Ron Manley.

25 April In the US Senate, the Subcommittee on Defense of the Committee on Appropriations conducts a hearing on the *Chemical Demilitarization Program*. Testifying on behalf of the US Army are Acting Secretary of the Army Dr Joseph Westphal, Program Manager for Chemical Demilitarization James Bacon and Program Manager for Assembled Chemical Weapons

Assessment Michael Parker. Westphal provides an overview of the current status of the US chemdemil programme, which has to date destroyed over 22 per cent of the original US stockpile of 31,496 tons of chemical agent, and emphasizes that "the program continues to meet or exceed requirements of the Chemical Weapons Convention."

As to individual facilities, Westphal says that closure activities at the Johnston Atoll facility [see 29 Nov 00] should be completed by the fourth quarter of FY 2003. To date, over 5,000 tons of GB have been destroyed at Tooele and all GB munitions should be destroyed in 2001 with closure activities beginning in the fourth quarter of FY 2004. Construction of destruction facilities at Anniston and Umatilla is almost complete with operations scheduled to begin in the third and fourth quarters of FY 2002 respectively. Construction of the Pine Bluff facility is half-way complete with destruction activities expected to begin in the fourth quarter of FY 2003. Following pilot testing of alternative technologies at Newport and Aberdeen Proving Ground in 2004, both plants are due to start full destruction activities in the first and second quarters of 2005 respectively. Finally, activities at both the Pueblo and Blue Grass plants are on hold pending the results of the Congressionally-mandated ACWA programme.

The Chemical Weapons Working Group makes public an internal Army memo which states that the US will be unable to meet the 2007 destruction deadline set out in the CWC [see also 8 May 00]. In fact, the memo seems to imply that six of the nine chemdemil facilities will need to continue operating after the 2007 deadline and that of those six, five would still be operating after the possible five-year extension to the CWC deadline has run out in 2012. According to a PMCD spokeswoman, the memo is authentic but represents a "worst-case scenario". She adds that "we still believe the 2007 deadlines are achievable."

25–27 April In Geneva, the preparatory committee for the fifth BWC review conference convenes under the chairmanship of Ad Hoc Group chairman, Tibor Tóth. [For further detail, see *Progress in Geneva* above.]

26 April President Putin signs presidential decree no. 487 establishing the State Commission for Chemical Disarmament [see 19 Jan]. The commission is a high-level body created to coordinate the activities of various government agencies in the Russian chemdemil programme, to draw up proposals for state policy in this area, to coordinate work with local populations where chemical weapons are stored and to monitor the progress of the chemdemil programme and the use of funds allocated to its implementation. The commission will likely meet twice a year. It is headed by Sergei Kiriyenko, the former prime minister and current presidential plenipotentiary for the Volga region, where many CW facilities are located. Other members of the commission include Zinovy Pak, director-general of the Munitions Agency, Anatoly Kvashnin, head of the General Staff, representatives of several government agencies, heads of the regions in which CW are stored and to be destroyed and the president of the Russian Green Cross.

26 April In Washington, the Monterey Institute's Center for Nonproliferation Studies holds another [see 17 Apr] seminar in its 2001 briefing series. The meeting, *The Chemical Weapons Convention: Implementation Challenges and Solutions*, is intended to launch the CNS report of the same name, edited by Jonathan Tucker. The 72-page report includes contributions from researchers from the Peace Research Institute Frankfurt, CNS, the Stimson Center, the Carnegie Moscow Center, Dupont Company, the Harvard Sussex Program and the Chemical and Biological Arms Control Institute.

27 April In Abuja, Nigeria, at the African AIDS summit, Libyan leader Mu'ammar Al-Qadhafi includes the following in his address: "How did this disease appear? The answer is serious. What is the answer? The answer is that the laboratories of the US secret service, the CIA, have used viruses in biological wars which led to the birth of the AIDS virus. Yes, this is the astonishing truth." [see also 8 Apr]

27 April In the UK House of Commons, the government answers a question on the authorization for use and deployment of CR. According to Minister of State for the Armed Forces John Spellar, CR was first authorized for use by British forces in October 1968, although authorization for its use in Northern Ireland, "in special circumstances only", was not given until October 1973. The Minister adds that strict guidelines govern both deployment and use of CR. According to the Minister, CR was available in both aerosol form and for use in water cannon in 1973. A wheeled dispenser was introduced in December 1974, a vehicle-based version was deployed in 1976 and a projectile delivery device was authorized for use in 1977.

Later, this question is followed up by another asking what form the aerosol version of CR took and what authorization was given for aerosol CR weaponization. The government responds that in both 1968 and 1973, CR was authorized for use in aerosol form as a hand-held squirt device known as a self-protection aid device (SPAD). The response adds that authorization for CR to be held in readiness for use has always been subject to ministerial approval.

28 April In Kazakhstan, the Agricultural Research Institute at Gvardeysk in Zhambyl Region is the subject of a report on Khabar Television, which states that the institute, founded in the late 1950s, was formerly a top-secret biological-weapons establishment where anti-animal and antiplant agents were developed. The present director, Saydigappar Mamadaliyev, speaks to camera about foot-and-mouth disease. A few days later another report about the institute – by the same reporter, Sergey Ponomarev — is screened in Russia on NTV International television. The report includes the suggestion that "actual biological sabotage could have been the cause of the foot-and-mouth epidemic in western Europe".

30 April From the US State Department, the Office of the Coordinator of Terrorism releases its twentieth annual terrorism report [see 1 May 00], *Patterns of Global Terrorism 2000*. The report says there were 423 terrorist incidents in 2000 as compared with 392 during 1999. In 2000, 405 people were killed and 791 wounded in such attacks, compared with 233 killed and 706 wounded. The list of state sponsors remains as before: Cuba, Iran Iraq, Libya, North Korea, Sudan and Syria. On WMD terrorism, the report says: "At the dawn of a new millennium, the possibility of a terrorist attack involving weapons of mass destruction (WMD) — chemical, biological, radiological, nuclear (CBRN), or large explosive weapons — remained real. As of the end of 2000, however, the most notorious attack involving chemical weapons against a civilian target remained Aum Shinrikyo's sarin nerve agent attack against the Tokyo subway in March 1995. Most terrorists continued to rely on conventional tactics, such as bombing, shooting and kidnapping, but some terrorists — such as Usama Bin Ladin and his associates — continued to seek CBRN capabilities."

30 April–3 May In Melbourne, the government, the Royal Australian Chemical Institute and the OPCW Secretariat co-host a regional workshop on the CWC, *Promoting Regional Cooperation in Southeast Asia and the South Pacific*. The representatives of the 14 participating states (11 states parties and three signatory states) emphasize the need for increased support, from both the Secretariat and other states parties, in establishing National Authorities, preparing declarations and drafting implementing legislation. Discussions also focus on the importance of education and awareness of the CWC and chemical weapons-related issues. Singapore proposes a regional meeting of National Authorities in the region, mirroring the annual meetings convened in the Latin American and Caribbean group [see 27-29 Mar].

This Chronology was compiled by Daniel Feakes and Julian Perry Robinson from information supplied through HSP's network of correspondents and literature scanners.

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Forthcoming events

27–28 June, The Hague —
Twenty-fifth session, OPCW
Executive Council (subsequent
session: 24–28 September)

5–6 July, Gent (Belgium) —
*International Conference on
Chemical Munition Dump Sites
in Coastal Environments*,
Renard Centre of Marine
Geology, enquiries to fax: + 32
9 264 4967

23 July–17 August, Geneva —
Twenty-fourth session, BWC
Ad Hoc Group

4–7 September, Norfolk, VA
— *First Biennial Threat
Reduction Conference*, Defense
Threat Reduction Agency,
details on www.dtra.mil

28–30 September, Wiston
House, Sussex — Wilton Park
conference on *Control regimes
for chemical and biological
materials: towards a safer and
more prosperous world*, details
on www.wiltonpark.org.uk

19 Nov–7 Dec, Geneva — Fifth
BWC Review Conference

Tucker, Jonathan B. "The 'Yellow Rain' controversy: lessons for arms control compliance", *The Nonproliferation Review*, vol 8 no 1 (Spring 2001), pp 25-42.

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