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CELEBRATION OF A CENTENARY AND SOME BIRTHDAYS

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The second quarter of 1999 will see the celebration by the international legal community of the centenary of the convening of the Hague Peace Conferences. The main achievements of the two Conferences, in 1899 and 1907, were the founding of the International Court of Arbitration and a major step forward in the codification of the laws of war. But for readers of *The CBW Conventions Bulletin*, the cause for remembrance is Hague Declaration (IV,2) which banned "the use of projectiles the sole object of which is the diffusion of asphyxiating or deleterious gases". For although this was observed as a binding legal instrument for less than 15 years from its entry into force on 4 September 1900 until the use of chlorine in the Ypres salient in 1915, it remains important as the beginning of the process leading to the Chemical Weapons Convention. (The 1874 Brussels Declaration prohibiting *inter alia* the employment of poison or poisoned weapons was never ratified by the states involved)

February 8 saw the 71st birthday of the next important instrument, the 1925 Geneva Protocol, which entered into force in 1928. This reaffirmed the prohibition of the use in war of asphyxiating, poisonous or other gases, and extended the prohibition to the use of bacteriological methods of warfare. The reservations entered on ratification by most of the major Powers diminished the force of the Protocol, as did the fact that it did not prevent development of new forms of chemical or biological weapon or preparations for their use, including, in some cases, the production of massive stockpiles. Nonetheless the Protocol must be considered a successful instrument. Chemical and biological weapons were not used outside the Japan–China conflict during the Second World War and only a handful of instances of use of chemical weapons have been recorded during the whole 70 years. So far, fortunately, there has been no major recorded instance of use of biological methods of warfare going beyond the experimental stage. This last fact must also owe something to the Biological Weapons Convention which saw its 24th birthday on 26 March. Detailed consideration of the BWC and the work of the Ad Hoc Group in Geneva, which is drafting a protocol to give the Convention more teeth, falls outside the scope of this paper.

What of the youngster which celebrates its second birthday on 29 April — the Chemical Weapons Convention — and its guardian — the OPCW? Can they do the job for which they were created? Will the CWC be strong enough to survive events in the modern world? What more is required of those who are responsible for its future health? Given the events which surrounded the entry into force — the delay in ratification by several key states, including the United States and Russia, the only two then declared possessors of major stockpiles of chemical weapons; the absence of consensus about the value of the Convention in the US Congress (in contrast to the situation in most Parliaments) with the consequent application of worrying conditions to the ratification and the long delay in enacting the implementing legislation; the inability of the Preparatory Commission to solve several important operational issues which had been included in its mandate — there was inevitably a certain air of crisis and gloom about the first days. This was not helped by the initial inability of the "policy making organs" to take decisions on some of the urgent issues inherited from the Commission. Two years on it is possible to stand back and recognise just how much has been achieved.

The first measure is the degree of strengthening of the norm of international law prohibiting use of chemicals as weapons of war. Is it yet, to quote the preamble to the Geneva Protocol, "binding alike on the conscience and the practice of nations"? The statistics are striking, given the relatively short time since the CWC was opened for signature. 121 states have ratified or acceded to the Convention. A further 48 signatory states are obliged under the Law of Treaties not to take any action inconsistent with the objec-

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tives of the Convention. Of the 24 states which have not committed themselves to the Convention, only 10 are not Parties to the Geneva Protocol — Andorra, Belize, Eritrea, Mozambique, Niue, Palau, Sao Tome and Principe, Somalia, Tuvalu, Vanuatu. Which is not to suggest that the international community can afford to slacken its efforts to bring Angola, North Korea, Egypt, Iraq, Lebanon, Libya, Sudan, Syria and Yugoslavia (Serbia and Montenegro) into the fold of the CWC.

The strikingly successful start to fulfilling the Convention's objective of ridding the world of chemical weapon stocks and related facilities was clearly demonstrated in the statement by the Director-General to the Conference of the States Parties at its Third Session on 16 November 1998 in which he said:

Eleven of the 59 declared chemical weapons production facilities have already been certified as destroyed, and the conversion for peaceful purposes of another two has been approved by the Conference of States Parties. At the moment we have under the Conventions verification regime: 48 chemical weapon production facilities; 34 chemical weapons storage facilities, containing between them eight million chemical munitions and more than 25 thousand bulk containers filled with chemical agent; 5 operating chemical weapons destruction facilities; and 45 sites declared as containing old or abandoned chemical weapons.

These statistics are impressive enough but more important is the coverage. When the Provisional Technical Secretariat proposed that the Preparatory Commission should plan for one chemical weapons related declaration in addition to those expected from the US and Russia there was an immediate outcry and a demand to know where the finger was being pointed. We defended ourselves by pointing out that Iraq had been shown to have a chemical weapons programme and that it was only prudent to assume there could be another. In the event two additional Member States declared active programmes involving significant stockpiles and several more declared facilities from discontinued programmes.

The signature by President Clinton on 21 October 1998 of the United States domestic implementing legislation paved the way for a full US declaration of its civil chemical industry. Once this has been processed by the Technical

Secretariat virtually the whole of the world's chemical industry capable of producing chemicals of concern to the Convention will be brought under the scrutiny of the OPCW and its verification system.

The OPCW Inspectorate has successfully paid initial visits to all the chemical weapons related facilities listed above in addition to carrying out inspections at more than 120 facilities under Schedules 1, 2 and 3. In total, by 11 January 1999, 23,781 inspector days had been spent on site at facilities in 28 countries.

The Convention goes beyond simply prohibiting chemical weapons and requiring their destruction within the states parties. It also requires the states parties to co-operate in preparing to assist any of their number which might suffer from the use or threat of use of such weapons. As long as there are significant potential chemical weapons possessor states outside the treaty regime it will be important to implement these provisions properly. Forty states parties have informed the Technical Secretariat how they intend to fulfill their obligations; 22 have offered specific assistance and more than one million guilders has been placed in the Article X Assistance Fund. More is needed but a good start has been made.

The policy making organs are also starting to find their feet. The Executive Council has made recommendations to the Conference of States Parties for decisions in several important areas of OPCW operation such as draft model facility agreements for different categories of facility and a means of easing the problems the CWC was causing for the trade in saxitoxin for medical purposes.

In short, the CWC is clearly a success at two years of age but for our successors to draw the same conclusion when the next important anniversaries come around, (including, we trust, its centenary!) a lot more hard work will be required of the OPCW — Member States and Technical Secretariat together — to implement fully all its provisions and to bring it to universal membership.

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Developments in the Organization for the Prohibition of Chemical Weapons

The period under review, from mid-December 1998 to early March 1999, has seen the Organization for the Prohibition of Chemical Weapons (OPCW) return to more routine activities after the particularly busy preceding period. However, this is an especially short intersessional period and preparations have already begun for the fourth session of the Conference of the States Parties which will be held in less than four months time, during 28 June–2 July.

The period under review has witnessed a great deal of media speculation regarding a possible future role for the OPCW in Iraq. Because Iraq has neither signed nor ratified the Chemical Weapons Convention the OPCW has to date had no involvement whatsoever in Iraq. However, in the search for guidance on the future of verification in Iraq the United Nations Security Council has inevitably requested assistance from “other relevant expertise”, besides that al-

ready existing with the UN Secretariat, the IAEA and UNSCOM. Accordingly, the OPCW received a request from Ambassador Celso Amorim, the chairman of the three Security Council panels on Iraq, for experts to sit on the disarmament and ongoing monitoring and verification panel. On 15 February the OPCW announced that the Director of the Inspectorate, Mr Ichiro Akiyama, had been appointed to the disarmament panel alongside 19 other international disarmament experts. The panel held its first meeting during 23–26 February and is due to report to the Security Council by 15 April.

During the period under review no additional states have ratified or acceded to the Convention. However, planning is well advanced for a series of regional seminars, workshops and bilateral visits aimed at increasing the universality of the Convention. The first of the regional seminars is to be held in Paramaribo, Suriname in March with another in Ig, Slovenia in April. Further seminars are planned for Chile and Malta later in the year. Workshops are planned for those delegations which are based in Brussels rather than The Hague as are a number of bilateral visits to states which are based neither in The Hague nor Brussels.

Attention in The Hague has been focused primarily on those issues which were referred to the Executive Council by the third session of the Conference in November 1998. The fourteenth session of the Council considered a number of these issues, while others were addressed in formal and informal forums. Decisions were taken on a number of significant issues, for example on the notification requirement for transfers of saxitoxin and the costs of inspections of abandoned chemical weapons. The Council also approved a model facility agreement for Chemical Weapons Storage Facilities (CWSFs). The Technical Secretariat has now completed over 400 inspections including an initial inspection in Iran. However, a number of important issues have yet to be resolved including the relationship agreement with the UN, the staff regulations and a range of issues related to old and abandoned chemical weapons. It is likely that in the run-up to the fourth session of the Conference intensive efforts will be made to resolve as many issues as possible.

Executive Council

During the period under review the Executive Council held one regular session, its fourteenth, on 2–5 February. In addition to this regular session the Council also held two formal meetings (for the distinction between sessions and meetings see the previous quarterly review) on specific issues on 15 January. A number of informal meetings of the Council were also held during the period under review. The Council will meet for its next regular session, its fifteenth, during 26–29 April. This will be the last regular session of the Council before its composition changes on 12 May in accordance with the election of new members by the third session of the Conference.

Status of implementation of the Convention The Secretariat did not submit a *Status of Implementation Report* (SIR) to the fourteenth session of the Council. Instead the Director-General reported orally on the status of the various declarations and notifications required of states parties by the Convention. He informed the Council that initial decla-

rations had been received from four states parties (Benin, Ghana, Indonesia and Ukraine) in the period since the last SIR. These latest submissions brought the total of submitted initial declarations to 90, as of 22 January. Although there are still a substantial number of initial declarations outstanding, these figures demonstrate that the political pressure applied by the Council, the Conference and by member states bilaterally combined with the practical declaration assistance and support programme organised by the Secretariat is finally having an effect. The Director-General also informed the Council that during his recent trip to Iran he was made aware of the contents of the second part of the Iranian initial declaration.

Reporting on the submission of notifications by states parties the Director-General told the Council that the Secretariat had received the following notifications from states parties: 65 notifications of points of entry/exit for inspection teams; 53 notifications of standing diplomatic clearance numbers for non-scheduled aircraft; and 86 notifications identifying national authorities. The number of states parties which had submitted information on their national implementing legislation in accordance with Article VII.5 had not increased since the last quarterly review and remained at 40.

The Director-General submitted to the fourteenth session of the Council a separate report on difficulties which had been encountered regarding the requirement for states parties to provide two-year multiple entry/exit visas to inspectors. According to the Convention two-year multiple entry-exit visas should be issued by states parties not later than 30 days after acknowledging receipt of the list of inspectors. Of the 121 states parties the following was the case as of 29 January: 25 did not require visas from OPCW inspectors (either due to membership of the Schengen Agreement or because individuals travelling on UNLPs are exempt from visa requirements); 4 states parties had already issued visas to all inspectors whose nationality requires one; 40 states parties had indicated they will provide visas when requested; 45 states parties had yet to respond to the Secretariat's request for information; and seven had provided insufficient information.

The Director-General informed the Council that 22 states parties are routinely provided with information from declarations under paragraph 2(b)(i) of the Confidentiality Annex. However, the Council expressed its concern that only 19 states parties had informed the Secretariat of their procedures for the handling of confidential information disseminated by the OPCW. The thirteenth session of the Council had requested all states parties which had not yet done so to provide this information in accordance with paragraph 4 of the Confidentiality Annex. At its fourteenth session the Council requested the remaining states parties to provide this information as soon as possible and decided to review the situation at its next regular session.

Destruction plans The fourteenth session of the Council confirmed the decision of the previous session on the agreed detailed plan for the verification of destruction of chemical weapons at Dugway Proving Ground's Munitions Management Device Version 1 (MMD-1) in the USA. The Council also considered and adopted a decision on another agreed detailed plan this time for activities at Aberdeen

Proving Ground's Prototype Detonations Test and Destruction Facility (PDTDF).

On 15 January the Council held its third formal meeting in order to consider two proposals by the USA for the destruction by hydrolysis of GB and VX on a limited scale. As reported in the previous quarterly review the twelfth session of the Council approved a decision on the destruction by hydrolysis of sulphur mustard. The proposed destruction activities considered by the meeting were similar to that approved by the twelfth session. At its meeting the Council did not reach a decision and instead deferred consideration of the proposals to the fourteenth session. At this session both decisions were approved by the Council. The transparency and verification measures approved by the Council reflected those approved in its earlier decision. The Council also decided that similar destruction activities in the future should continue to be approved on a case by case basis. At its fourth formal meeting on 26 March the Council will consider another proposal by the USA for the destruction by hydrolysis of VX on a limited scale.

Combined plans for destruction and verification

Regarding the destruction of Chemical Weapons Production Facilities (CWPFs), the Director-General submitted to the fourteenth session of the Council the combined plans for destruction and verification of the BZ Munitions Fill Facility at Pine Bluff Arsenal in the USA. The Council considered the plans and decided to return to the issue at its fifteenth session.

Informal consultations on the destruction of both chemical weapons and CWPFs are ongoing with the next consultations due to be held immediately prior to the fifteenth session.

Requests for conversion of CWPFs The Director-General submitted to the Council his report on a Russian request for the conversion of a CWPF for purposes not prohibited by the Convention. The Director-General's report recommended that the conversion request be approved by the Council and referred to the fourth session of the Conference. The Council noted the Director-General's report and informal consultations on the issue continued, with a view to a decision being taken at the meeting of the Council on 26 March. To date two such requests, for former CWPFs in the USA and the UK, have been approved by the Conference.

The Director-General also informed the Council that another state party had submitted a plan for the temporary conversion of a CWPF to a CWDF. In accordance with Part V.59 of the Verification Annex, the Secretariat and the state party concerned have concluded a transition agreement outlining the additional inspection measures to be undertaken during the conversion phase. This agreement shall remain in force until the facility begins operating as a Chemical Weapons Destruction Facility (CWDF).

Transparency and confidentiality As reported in the previous quarterly review a number of states parties had stated that the *Status of Implementation Report* (SIR) submitted to most sessions of the Council by the Director-General should contain more information including inspection results. In order to meet this demand for greater internal

transparency the SIR submitted to the thirteenth session of the Council included a great deal more information than previous SIRs but was accordingly classified as Highly Protected to safeguard confidential information submitted by states parties. However, other states parties felt that the information provided by previous SIRs had been sufficient and pointed to paragraph 2(b)(ii) of the Confidentiality Annex which only requires the provision of "general reports on the results and effectiveness of verification activities" by the Secretariat. The third session of the Conference therefore requested the Council to address the issue of transparency and to prepare a format for reporting information on verification activities, including inspection results.

The Council held an informal meeting on 14 January to discuss the format for reporting information on verification activities and also held a brief informal session on 3 February during its fourteenth session on the same subject. The USA and Italy submitted a paper to the thirteenth session which included a draft format for the SIR. The Council discussed this joint paper alongside a draft SIR format proposed by the Secretariat. While many states parties supported the idea of being provided with more information on verification activities, many others felt that they were already receiving adequate information and expressed reservations, citing national security concerns about identifying and revealing the location of military facilities, for example. Some states parties also questioned changes which could involve the Council duplicating the work of the Secretariat and which would undermine the informal processes whereby many uncertainties and ambiguities are resolved between states parties without being brought formally to the attention of all member states. The discussions also demonstrated that the precise modalities for the reporting of information to states parties by the Secretariat had yet to be finalised. Questions were raised regarding the distinction between the SIR and the annual Verification Implementation Report (VIR), where information on activities under Article IX, in particular challenge inspections, would be reported, and how other reports such as those on the confidentiality regime and internal oversight are transmitted to states parties. The fourteenth session of the Council decided to hold further informal consultations with the aim of finalising a reporting format before its fifteenth session.

Facility agreements A number of facility agreements for chemical weapons facilities in Russia were submitted to the fourteenth session of the Council for its approval. Of these, seven were for Chemical Weapons Storage Facilities (CWSFs) and one was for a CWPF which is scheduled for destruction. All eight facility agreements were approved by the Council.

The Director-General informed the Council that facility agreements for five Schedule 2 plant sites in Switzerland would be submitted for consideration by its fifteenth session.

Model facility agreements Following intensive informal consultations by the facilitator, Mr Ali Soltanieh (Iran), on this unresolved issue prior to the fourteenth session of the Council a draft model facility agreement for CWSFs was submitted to the Council. It was approved by the same session, pending confirmation by the fourth session of the

Conference. The facilitator is now working on a model facility agreement for CWPFS.

Costs of inspections of abandoned chemical weapons

The issue of the attribution of the costs of verification of old/abandoned chemical weapons (O/ACW) is one of the major unresolved issues because of the possible budgetary implications. In 1998 Mr Urs Schmid (Switzerland) was appointed as friend of the chair and facilitator for this issue. He submitted a draft decision to the third session of the Conference on the cost of verification of ACW but it failed to find consensus and was not adopted. In the period before the fourteenth session of the Council further informal consultations were held and a revised draft decision was submitted to the Council. The draft decision incorporated a number of criteria for attributing the cost of inspections of ACW. The verification costs for ACW confirmed by the Secretariat as not meeting the definition of OCW will be attributed to the abandoning state party. The costs of inspections of ACW confirmed by the Secretariat as OCW will be attributed to the OPCW, while the costs of further verification measures will be attributed to the abandoning state party. The attribution of these costs will be based on the reimbursement criteria agreed at the third session of the Conference for Article IV and V inspections. This decision was adopted by the fourteenth session of the Council, subject to confirmation by the fourth session of the Conference. However the resolution of this issue is only one part of the larger question of the attribution of the costs of verification of O/ACW. The friend of the chair will continue to address the remaining aspects of this issue, although they are intimately linked with the resolution of other unresolved issues, particularly the "usability" of OCW produced between 1925 and 1946.

Transfers of saxitoxin The issue of transfers of saxitoxin has been on the Council's agenda for over one and a half years. There are two main aspects of this issue, one dealing with the notification requirements and the other dealing with re-transfers of saxitoxin. The interim decision taken by the twelfth session of the Council has effect for only 270 days, unless a change or amendment to the Convention is adopted under Article XV. The Council held its second formal meeting on 15 January to discuss the proposal submitted to the thirteenth session by Canada for such a change to the Convention. As reported in the previous quarterly review this proposal allowed states parties to transfer small quantities of saxitoxin for medical and diagnostic purposes on the condition that they submitted notifications in advance. Following statements from a number of delegations the meeting decided to recommend to all states parties that the proposed change be adopted. According to Article XV.5(d) of the Convention the proposal will be considered adopted if no state party objects to it within 90 days of receiving the recommendation. The Director-General reported to the fourteenth session of the Council that, in accordance with the interim decision the USA and Canada had both submitted advance notifications of their intention to transfer saxitoxin for medical and diagnostic purposes.

During the period under review the Council was also active on the retransfer aspect of the saxitoxin issue. Regarding Schedule 1 chemicals Part VI.4 of the Verification

Annex states that "chemicals transferred shall not be retransferred to a third State". However, states parties such as Australia, Canada and the United Kingdom have pointed out since entry into force this provision has severely restricted research with saxitoxin around the world. For example, there is currently only one producer of tritiated saxitoxin in the world, a company in the UK. Its saxitoxin is imported from the USA and then tritiated in the UK. Before the entry into force of the Convention the tritiated saxitoxin would then be exported to researchers around the world, but since April 1997 Part VI.4 has prevented such retransfers taking place. Canada and the UK submitted a proposal for a change to the Convention to the Director-General during the third session of the Conference. In accordance with Article XV the Director-General communicated the proposal to all states parties, the Council and the depositary. The proposal added another new paragraph to section B of Part VI of the Verification Annex which read as follows: "For quantities of 5 milligrammes or less, the Schedule 1 chemical Saxitoxin may be retransferred to a third State Party for research, medical/diagnostic and pharmaceutical purposes. In such cases, the notification shall be made at the time of transfer". This proposal, along with the Director-General's evaluation of it, was submitted to the fourteenth session of the Council.

The evaluation stated that from a legal point of view the proposal goes beyond a mere administrative or technical change to the Convention and is, in effect, an amendment. According to the evaluation because it changes a substantive provision of the Convention the proposal is not a change within the meaning of Article XV.4. Whilst acknowledging that the prohibition on the retransfer of saxitoxin could impede the use of saxitoxin for legitimate medical, diagnostic and pharmaceutical purposes the evaluation states that the application of Part VI.4 can only be changed by an amendment to the Convention under Article XV. The evaluation goes on to state that if retransfers of saxitoxin for legitimate purposes were authorised the necessary quantities could be produced in a more limited number of facilities which could be more easily monitored and controlled. As it stands without an agreement on the retransfer of saxitoxin it is likely that individuals who used to import saxitoxin might begin to produce their own. The evaluation also concluded that the ceiling of 5 milligrammes would not constitute a threat to the object and purpose of the CWC.

The fourteenth session of the Council could not reach consensus on the Canadian/UK proposal. Both countries therefore informed the Council that they would withdraw the proposal from further consideration and would be requesting the Director-General to inform all states parties accordingly.

Chemical industry issues In accordance with the request of the third session of the Conference, the Director-General submitted to the Council a report on the implementation of paragraphs 12 of Parts VII and VIII of the Verification Annex. These two paragraphs deal with the criteria used to select Schedule 2 and 3 plant sites for inspection. The Director-General reported that two Schedule 2 plant sites had been inspected in 1998 at which activities had taken place involving chemicals above the declaration threshold in 1994, but not in 1995, 1996 or

1997. These inspections were conducted on the assumption that inspections could be launched on the basis of initial declarations made more than three years prior to the year of the inspection. However, following comments from a number of states parties the Director-General reported that this policy had been changed to reflect that Part VII.12 states that inspections should be carried out at those plant sites which produced, processed or consumed during the previous three calendar years more than the specified threshold values. For Schedule 3 plant sites the Director-General reported that selection was carried out in accordance with Part VIII.12 of the Verification Annex.

With regard to Schedule 3 inspections the Director-General reported that a computer program had been developed in 1998 to ensure the random selection of plant sites for inspection. He submitted a report to the fourteenth session of the Council explaining that this program had recently been modified to ensure a more equitable geographic distribution of the plant sites selected for inspection. This program has been used for selecting the seven plant sites to be inspected in 1999, each of which is in a different state party, thus avoiding earlier problems when certain states parties were selected a number of times. The Director-General also reported on a review of the algorithm used for the assessment of the risk posed by Schedule 2 plant sites to the object and purpose of the Convention. The review uncovered a number of flaws which have been addressed in a revised algorithm drawn up by an internal task force. This revised algorithm has been used on a provisional basis for Schedule 2 inspections since the beginning of 1999.

UN relationship agreement As reported in the previous quarterly review the thirteenth session of the Council decided to submit to the UN Secretariat for its comments a revised version of the draft relationship agreement as finalised between the UN and OPCW secretariats earlier in 1998. The revisions made by the Council concerned four main areas: the status of the OPCW as an international organisation; the role and responsibilities of the Security Council under the UN Charter; the protection of confidential information by the two organisations; and the provisional application of the agreement. In its comments to the OPCW the UN Secretariat stated that while it could accept some of the Council's revisions further work is required on certain aspects before the agreement could be finalised. For a number of OPCW delegations the main sticking points in this long-running negotiation appear to be on references to the Security Council and on the provisions for the protection of OPCW confidential information. When agreement upon a draft is finally reached it must be approved by both the OPCW Conference of the States Parties and the UN General Assembly. The OPCW holds the fourth session of its Conference in June 1999 and the UN General Assembly begins its fifty-fourth session in September. Therefore the agreement is unlikely to enter into force until late 1999, particularly if the procedure for its provisional application is deleted from the final text as the Council suggested. The fourteenth session of the Council noted the comments of the UN Secretariat. It stressed the importance of adopting a decision on the issue at its fifteenth session for recommendation to the Conference and asked the Council chairman to use his good offices to this end.

Financial issues The Director-General reported to the Council on the status of contributions by states parties to the 1999 budget. According to the financial regulations assessments should be paid in full within 30 days of receiving notification from the Secretariat. The deadline was approximately 15 January by which time only 18 member states had paid their contributions either in full or in part. Of the total 1999 assessments of NLG 108,040,000 the Secretariat had received only NLG 27,000,000 by 15 January. The Director-General also reported to the Council on the completion of the 1998 budget. This has been closed with a surplus of approximately NLG 20,000,000 most of which relates to inspection costs (NLG 13,700,000) and salary and common staff costs (NLG 3,600,000). However, as of 1 February 1999, 63 of the 121 member states, or 53 per cent, had still not paid their 1998 assessments, either in full or in part. These outstanding contributions amounted to 5.3 per cent of the contributions for the 1998 budget. As of 31 December 1998 of these 63 member states, 28 had not contributed to the 1997 budget, either in full or in part.

The draft budget for 2000 was circulated to the members of the Council on 16 February. Following comments made during the negotiation of the 1999 budget and informal consultations held in January the presentation and layout of the budget have been revised. The draft budget totals NLG 148,231,400 of which NLG 78,549,100 is for verification costs and NLG 69,682,300 is for administrative and other costs. The assessment to member states amounts to NLG 120,834,800. As it currently stands the draft budget represents an increase of NLG 15,483,400, or 12 per cent, on the 1999 budget. Informal consultations on the draft budget are to take place on 15 and 17 March and 12 and 14 April and it will also be considered by the fifteenth session of the Council. The draft budget should be finalised during May for submission to the fourth session of the Conference.

The Director-General submitted to the fourteenth session of the Council a report on the status of reimbursement of verification costs under Articles IV and V. As of 25 January the eight states parties which had submitted declarations under Articles IV and V (China, France, India, Japan, Russia, the UK, the USA and one other) had been invoiced NLG 10,356,609 for inspections carried out in the period from 1 June 1997 to 30 September 1998.

Of this amount only NLG 157,969 had actually been received by the Secretariat, leaving NLG 10,198,640 outstanding. The Council requested the states parties concerned to make payment as soon as possible.

As reported in the previous quarterly review, an informal meeting of the Council will be held on 31 March to consider the draft medium-term plan which was submitted to the third session of the Conference. Consideration of the draft plan is also on the agenda of the fifteenth session of the Council with a view to making a recommendation to the fourth session of the Conference.

The Advisory Body on Administrative and Financial Matters (ABAF) met for its fifth session during 1-5 March. Items on its agenda included the OPCW staff regulations, the 1999 budget and the medium-term plan.

Other issues The Council continued to discuss the draft staff regulations as referred to it by the third session of the Conference. The Director-General submitted a note to the

fourteenth session of the Council on the proposed tenure policy, a key aspect of the staff regulations. As of 22 January the draft staff regulations drawn up by the friend of the chair, Mr Tsutomu Arai (Japan), provided for a maximum length of service with the OPCW of seven years, with the possibility of a further one year extension in exceptional circumstances. The justifications for this position appear to be a desire on the part of states parties to avoid staff members abusing extensions of contracts, to prevent the bureaucratisation of the Secretariat and to ensure that new expertise is regularly available. However, the Director-General expressed his opinion that setting an absolute maximum limit would be detrimental to the professional and efficient functioning of the OPCW, particularly at an early stage of its evolution. He noted that a large number of staff leaving at the same time could cause considerable instability and could also lead to budgetary increases to cover the costs of recruiting and training new staff members. The Director-General proposed that staff members could have a number of fixed-term contracts, each of three years, normally amounting to no more than nine years in total, but with the possibility of a further extension in compelling situations. Under both the Director-General's and the friend of the chair's proposals extensions would become progressively more difficult and the tenure policy would be underpinned by a rigorous performance appraisal system. The Council emphasised the importance of adopting a decision on the staff regulations at its next meeting or session and requested the friend of the chair to continue his consultations.

Regarding unresolved issues the Council considered a draft decision prepared by the facilitator on chemical weapons issues, Mr Albert Warnich (South Africa). This draft decision dealt with two unresolved issues: the declaration requirements for chemical weapons and the determination of how states parties report chemical weapons on their territory which are owned by another state. According to the draft decision the Secretariat is to review declarations submitted under Part IV(A) of the Verification Annex and revise the draft declaration forms accordingly. From the date of approval of the decision states parties should use these revised forms for any declarations under Part IV(A). The revised forms should be used both for chemical weapons belonging to the declaring state party and for chemical weapons owned by another state. This draft decision was approved by the Council, pending confirmation by the fourth session of the Conference.

As requested by the third session of the Conference the fourteenth session of the Council considered the issue of new inspection equipment. The Director-General submitted a revised version of the list of new inspection equipment and revised specifications for approved inspection equipment which he had submitted to the Conference. As requested by states parties at the informal consultations held on 11 December this updated list contained more information and detailed justifications and specifications for the requested equipment. The new equipment and revised specifications address four main areas: improvements to ensure the health and safety of inspection teams; improvements to logistics and administration during inspections; on-site monitoring equipment to reduce the costs of verification; and revisions necessary to due to the establishment of sam-

pling, sample preparation and analysis procedures. At its fourteenth session the Council noted the Director-General's intention to convene another round of informal consultations on 12 March. It is hoped that the fifteenth session of the Council will then be able to decide on a final proposal by the Director-General and make a recommendation to the fourth session of the Conference.

The Council also confirmed the decision of its previous session on the adjustment of the Director-General's salary.

Actions by Member States

Ratifications No states ratified or acceded to the Convention during the period under review.

Technical Secretariat

Declaration processing Another meeting of the reconstituted security audit team was held during 26–28 January. The team repeated its earlier position that the Electronic Document Management System (EDMS) is secure and ready for a full audit once data has been loaded onto it and the system is regularly used. Currently declaration information from 11 states parties, totalling around 10,000 pages, has been loaded on the security-critical network (SCN), but the EDMS itself has not yet been used. Operating procedures for the SCN and EDMS have been drafted but the audit team needs to carry out an operational assessment of these procedures before it can conduct a full audit. The Director-General told the fourteenth session of the Council that he aimed to have the full audit carried out before the end of April. Once the audit team has confirmed that the necessary measures have been carried out, the Director-General will request the formal approval of the Council to scan all declaration data into the SCN.

Inspections As of 22 February, 434 inspections had been conducted or were on-going in 29 states parties. The breakdown of these inspections was as follows: 9 to ACW sites; 96 to CWDFs; 108 to CWPfFs; 62 to CWSFs; 20 to OCW sites; 43 to Schedule 1 facilities; 82 to Schedule 2 plant sites; and 14 to Schedule 3 plant sites.

Implementation of Article X The International Cooperation and Assistance Division and the Swiss government are jointly organising a second chemical weapons protection chief instructor training programme (CITPRO II) which will be held during 25–30 April in Spiez, Switzerland. The course is a part of the Swiss offer of assistance under Article X and will provide training in civil chemical weapons protection, detection and decontamination for up to 40 chief instructors from member states. More information on the course can be found on the OPCW website {S/92/99}.

During 15–20 May, in cooperation with the Iranian national authority, the International Cooperation and Assistance Division is organising a course on medical defence against chemical weapons in Tehran. The course is intended for qualified doctors responsible for planning, preparing and implementing national programmes of medical defence against chemical weapons. It should facilitate the improvement of national protective programmes of states parties and their capability to make use of medical assis-

tance. Course participants will take part in theoretical lectures in addition to case studies involving chemical weapons casualties from the Iran–Iraq war. More information on the course can be found on the OPCW website. During his visit to Iran the Director-General was given details of Iran's offer of assistance under Article X. This offer involves the establishment of an international centre for the treatment of chemical weapons casualties, including the training of medical personnel from states parties.

As reported in the previous quarterly review the 1999 budget includes funding for the establishment of a network of experts in chemical weapons protection from states parties and the Secretariat. The first meeting of this protection network is currently being planned and a number of states parties have already expressed an interest in receiving assistance in establishing their own national protective programmes.

The International Cooperation and Assistance Division plans to hold two assistance coordination meetings in 1999. These meetings, the third and fourth such, are tentatively planned to take place on 25 April and 17–18 September respectively. The Secretariat is also to convene the first meeting of qualified experts for investigations of alleged use during 22–24 March. A second meeting is planned for later in 1999 after which the Secretariat will stage the first fully-fledged investigation of alleged use and delivery of assistance exercises.

The Director-General reported to the fourteenth session of the Council that only 10 states parties (Albania, Belarus, Canada, Czech Republic, France, Lithuania, Romania, Sweden, Switzerland and the UK) had provided information on their national protective programme as required under Article X.4. According to the Convention this information should be submitted annually by states parties, although the drafting of the relevant guidelines remains an unresolved issue. The Secretariat has also received additional offers of assistance under Article X.7. As of 24 February, contributions to the Voluntary Fund for Assistance stood at NLG 1,053,642 with contributions from 21 states parties (Belgium, Canada, Chile, Denmark, Finland, Hungary, Ireland, Italy, Kenya, Luxembourg, Mauritius, Netherlands, New Zealand, Norway, Oman, Peru, Republic of Korea, Slovenia, Sweden, Switzerland and Turkey). Three states parties (the Philippines, Poland and Spain) had expressed an interest in entering into bilateral agreements with the OPCW concerning the procurement of assistance. The number of states parties to have made unilateral offers of assistance stood at 22 (Australia, Austria, Bulgaria, Cuba, Czech Republic, France, Germany, India, Iran, Mongolia, Pakistan, Poland, Romania, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, UK and USA).

Implementation of Article XI As reported in the previous quarterly review the International Cooperation and Assistance Division is now implementing a range of promotional programmes under Article XI of the Convention. A central aspect of these programmes is the provision of support to national authorities. The International Cooperation and Assistance Division, in cooperation with the government of Iran, held two parallel regional national authority training courses in Tehran during 1–9 March and a further course will take place in Ypenburg, the Nether-

lands during 7–15 June. The declaration assistance and support programme incorporates the declaration assistance network and a series of implementation workshops. During 1998 experts from the network conducted four on-site visits and the Secretariat convened two workshops. A further meeting of the network will be held in The Hague on 30–31 March. An implementation workshop (combined with a regional seminar for the Eastern European group) will be held in Ig, Slovenia during 20–23 April with additional workshops to be arranged for other regional groups later in the year.

Another important element of the implementation of Article XI can be described under the rubric of “capacity-building”. The 1999 budget included a substantial increase in the funding for this aspect of international cooperation, from NLG 630,000 in 1998 to NLG 1,042,000 in 1999. In 1999 the Secretariat will implement a range of programmes aimed at improving national capacities in particular areas. For example, the Secretariat can help improve the technical competence of national analytical laboratories through on-site courses and training, the provision of consultants and the sponsorship of international workshops, seminars and symposia and of some of their participants. The Secretariat is also planning a number of meetings with other international organisations which are also concerned with strengthening national capacities in specific areas. A workshop is being planned with the World Customs Organisation (WCO) on national experiences in customs enforcement. The Secretariat is also planning to hold a series of technical seminars, such as the seminar in 1998 on saxitoxin, which concern implementation problems, for example, analytical issues, the designation of laboratories by the OPCW and destruction technologies, and to fund a limited number of research projects which are particularly relevant to the CWC.

Fourth and Fifth Official Proficiency Tests The results of the fourth official proficiency test were announced in late December 1998. The test scenario was particularly demanding as it depicted a challenge inspection of a non-declared chemical facility suspected of producing chemical warfare agents. Of the 21 participating laboratories from 20 member states, 12 met the adopted criteria and could be scored. Of these five identified all the deliberately introduced chemicals from the test samples and reported them with the requested analytical data. Of the nine laboratories which could not be scored seven reported false positives or irrelevant results while two did not provide a report.

The Director-General reported to the fourteenth session of the Council that the analysis period for the fifth test had expired for all 20 participating laboratories from 17 member states. The test samples were prepared by the GSRDC-4 laboratory in South Korea. Of the 20 laboratories, 19 provided their test reports within the specified time. The reports are currently being evaluated by the Secretariat and the Laboratory of the Government Chemist in the UK. The preliminary results are due to be discussed with the test participants at a meeting on 20 April.

Analytical support The Validation Group established by the Director-General met for its third session on 11–12 January. It evaluated analytical data which had been made available to it and confirmed that it was technically valid.

The list of validated and approved analytical data was then forwarded to the Director-General and will be considered by the fifteenth session of the Council. Once approved by the Council the data will be included in the Central OPCW Analytical Database. The Validation Group also requested the Director-General to submit to the Council a revised version of the certification procedure for the Central Analytical Database and on-site databases. Under the revised procedure the certification of each new version of the database will involve a series of tests in accordance with guidance provided by the Scientific Advisory Board and the Council. For both the Central Analytical Database and on-site databases the certification procedure requires that the contents of the respective database be indicated in a certificate signed either by the chairman of the Validation Group (for the Central Analytical Database) or by the head of the Technical Support Branch (for on-site databases). The issue of the scope of the Central Analytical Database has yet to be finalised. These revised procedures will be considered by the fifteenth session of the Council.

Official visits On 21 January President Martti Ahtisaari of Finland paid an official visit to the OPCW headquarters. During 22–25 January the Director-General visited Iran. In Tehran he met with the minister for foreign affairs, Dr Kharozi, the minister of defence, Admiral Shamkhani, and other senior officials. While in Iran he also visited the Mostazafan and Jaanbazan Foundation's Centre for the Rehabilitation of Chemical Weapons Victims near Sari. On 26 January the Director-General delivered the keynote speech at the opening of The Hague International Model United Nations conference. From 3 to 5 March the Director-General paid an official visit to Pakistan meeting with the Minister of Foreign Affairs, Mr Sartaj Aziz, and senior officials. He also addressed the National Defence College in Islamabad and the Lahore Chamber of Commerce and Industry.

Outreach activities The External Relations Division is preparing a range of outreach activities for 1999. The first event will be a regional seminar in Paramaribo, Suriname from 24–26 March for members of the Latin American and Caribbean group. A regional seminar will be held in Ig, Slovenia during 20–23 April for members of the Eastern European group. Further regional seminars are being planned for Chile, Malta, southern Africa and the south Pacific later in the year.

Another element of the Secretariat's outreach programme is participation support which is aimed at increasing the involvement in OPCW activities of delegations not based in The Hague. Staff members frequently brief delegates in Brussels on developments in the OPCW. Under participation support the OPCW has also funded a toll-free telephone line for delegations based in Brussels and funds their travel to events in The Hague. During 1999 participation support will also focus on building contacts with those states which do not have delegations in either The Hague or Brussels. The delegations of around 30 states parties and signatory states cover the activities of the OPCW from other cities, mainly London, Paris, Bonn, Geneva and New York or from their own capitals.

Staffing As of 1 March, 478 of the allotted 496 fixed term posts within the Secretariat were occupied. Of these, 326 were in the professional and higher category and 152 were in the general service category. With staff on short term and temporary assistance contracts included the total number of staff was around 525. The strength of the Inspectorate stood at 209, including 195 inspectors and 14 inspection assistants.

During the period under review the Director-General informed the Council of a number of changes made to the structure of the Secretariat. The first concerned the management of confidentiality within the Secretariat. Prior to the entry into force of the Convention a number of assumptions were made regarding the submission and handling of confidential information including: such information would be limited to some declaration-related data; the verification and inspection functions would be part of the same division; and the requirement for staff members outside of the Verification Division to handle confidential information would be very limited. However, the period since entry into force has demonstrated that these assumptions were not valid. The verification and inspection functions were split into two separate divisions upon entry into force. Most declaration data has been highly classified by states parties with the result that many of the downstream documents, such as final inspection reports, facility agreements and conversion requests, are also classified. It has therefore been necessary for staff members from other divisions and units of the Secretariat to also handle and process confidential information. Taking these factors into account the Director-General decided to dissolve the Confidentiality Branch of the Verification Division and create a Confidentiality Office within his own office where it would be much better placed to manage confidential information across the Secretariat. Some of the functions and resources of the Confidentiality Branch which related to declaration processing have been passed to the Declarations Branch.

The Director-General also announced the strengthening of the Verification Division to address its under-staffing. This has been done through a number of personnel transfers from other divisions. Six appropriately qualified volunteers from the Inspectorate have been transferred to the Verification Division on long-term loan and a P-2 position has been transferred from the Training and Staff Development Branch to the Declarations Branch.

Subsidiary bodies

Scientific Advisory Board The Scientific Advisory Board (SAB) will meet for its second session during 21–23 April. As reported in the previous quarterly review a number of the temporary working groups (TWG) established by the SAB's first session are due to submit reports to its second session. The inaugural meeting of the TWG on analytical issues will meet on 16–17 March in conjunction with a technical seminar. The TWG on ricin will hold its inaugural meeting on 22–23 March, also in conjunction with a technical seminar.

Confidentiality Commission The Confidentiality Commission will meet for its third session during 18–20 May.

This will be the first meeting of the new Commissioners as elected by the third session of the Conference.

Future work

Unresolved issues Although a number of issues were either resolved or removed from the list of unresolved issues by the third session of the Conference, there are still a substantial number which are still under facilitation in the Committee of the Whole (CoW). The CoW met on 28 January to review progress since the third session of the Conference and to prepare for the intersessional period ahead. As a result of the fourteenth session of the Council two issues have been fully resolved and aspects of two more have been addressed. However, 26 issues are still under facilitation by the CoW. Of these the drafting of guidelines on the usability of old chemical weapons is one of the most urgent, but also one of the most complex. The Director-General reported to the fourteenth session of the Council that the files on 25 inspections of O/ACW cannot be closed until the usability issue has been resolved. Resolution of this issue would also facilitate the resolution of other unresolved issues relating to the overall O/ACW verification regime such as the attribution of the costs of verification and the destruction and verification requirements for abandoned chemical weapons. As the fourth session of the Conference ap-

proaches thoughts will begin to turn to how the remaining unresolved issues should be addressed in the future. The use of the CoW during the intersessional periods was originally intended as a temporary measure as it was expected that the unresolved issues could all be resolved before the second session of the Conference. It has been suggested that those issues which still require attention should be referred to the appropriate organs and subsidiary bodies of the OPCW, such as the Council and the Scientific Advisory Board.

Preparations for the fourth session of the Conference

With only four months until the Conference convenes for its fourth session, preparations for the event are well underway. Informal consultations on the draft 2000 budget have already been initiated and the fifteenth session of the Council will consider the provisional agenda of the fourth session. Consultations are currently underway on a draft of the *Report of the Organisation on the Implementation of the Convention*. This can be seen as the "annual report" of the OPCW and is designed for circulation beyond the OPCW and its member states.

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

Strengthening the Biological and Toxin Weapons Convention

A three-week meeting, the thirteenth session, of the Ad Hoc Group to consider a legally binding instrument to strengthen the Biological and Toxin Weapons Convention (BWC) was held in Geneva from Monday 4 January to Friday 22 January 1999. As in the previous three-week sessions, negotiations focused on the rolling text of the Protocol.

There was the largest ever participation of states parties in the meeting reflecting the increasing sense that the negotiations are nearing completion. Sixty-five states parties and 5 signatory states participated at the thirteenth session; a net total of 8 more states parties than in the twelfth session held in September/October 1998 as 9 states (Bosnia-Herzegovina, Ecuador, Iraq, Jordan, Libya, Mauritius, Oman, Saudi Arabia, and the former Yugoslav Republic of Macedonia) participated in January 1999 whilst 1 state (Singapore) which had participated in September/October 1998 did not in January. Two additional signatory states (Gabon and Nepal) participated in January.

Twenty-eight new Working Papers (WP.325 to WP.352) were presented in January, the same number as in the four-week session in September/October 1998. As usual these were presented both by states parties (South Africa 8, United Kingdom 5, Russian Federation 3, NAM 2 along with single papers by 6 states and 3 papers by groups of two or more states) and by the Friends of the Chair (1).

There was a widespread sense of progress among participants at the January 1999 meeting with serious negotiations making progress in the area of visits and consolidating previous work on confidentiality and legal issues. A revised version of the Protocol was produced and attached to the procedural report of the January meeting (BWC/AD HOC GROUP/44). This was thus the seventh version of the rolling text — previous versions having been produced in June 1997 (35), July 1997 (36), October 1997 (38), February 1998 (39) and June/July 1998 (41). Although this was again the longest version so far produced comprising 312 pages (previous versions having 113, 167, 241, 241, 251 and 278 pages), there was a clear sense of progress with square brackets being removed in those parts of the rolling text discussed in January. Two Articles (VII and IX) had the previous square brackets removed from their titles leaving only one Article (II [Definitions]) with its title still within square brackets. As at the previous session, there was evidence in the 125-page Annex IV of the January procedural report of further text being prepared by the Friends of the Chair which in a transparent way show deletions and additions to the existing rolling text and thus give an indication of the way in which the Friends of the Chair envisage the text being developed towards a cleaner text with fewer square brackets. Such text is helpful as it enables delegations to

consider both the current rolling text and possible developments thereof.

Rolling Text Health Warning! It is important to emphasise that each new version of the rolling text is made up of relatively small sections with new language surrounded by much larger sections of older text which are *not* revised because there is insufficient time in the session for each FOC to review in his meetings all of the text for which he is responsible the older text will be revised whenever the next reading is made of that older text. Although copies of the *Outcome of Discussions by Friends of the Chair* are circulated as L-series documents, this is dependent on their being sufficient time to produce the L-series document before the end of the session. Consequently, the L-series documentation does not always include all the outcomes of the discussions by the Friends of the Chair although all such outcomes are incorporated into the rolling text attached to the Procedural Report. It is therefore easy to be confused about the latest terminology if the language in the rolling text is taken at face value without giving due consideration to which is the most recent text.

Although 30 meetings were planned, only 26 were held as there was an unexpected holiday on 18 January and the two meetings on the mornings of 20 and 21 January were used for informal consultations of definitions because there were clashes with Conference on Disarmament meetings on those mornings. Of the 26 meetings held, 6.5 were devoted to compliance measures, 6 to definitions, 5 to the investigations Annex, 3 to Article X measures, 1 to confidentiality, 1 to legal issues, 1 to national implementation and assistance, and 1 to organization/implementational arrangements, 0.5 to the preamble, 0.5 to the seat of the organization and 1 to an AHG meeting. No new Friends of the Chair were appointed although Carlos Simas of Brazil took over the Friend of the Chair on Article X Measures from Carlos Duarte who was no longer in Geneva.

The session as usual saw various NGO activities either providing papers or holding meetings at which briefings were presented for the AHG delegations. The Federation of American Scientists provided a paper on "Visits: A Unified Concept" and one entitled "Aerosol Trigger" with suggested criteria for such declarations. The Department of Peace Studies at the University of Bradford presented and distributed copies of a further two Briefing Papers in its series: No 18 "Visits: An Essential and Effective Pillar" and No 19 "The Future BTWC Organization: Observations from the OPCW". (Copies are on the website <http://www.brad.ac.uk/acad/sbtwc>). In addition, two Quaker lunches were hosted within the Palais des Nations to discuss key issues relating to visits and why these are regarded as essential and effective elements of the future Protocol.

Political Developments

The January AHG session saw the circulation of a European Union declaration which recalled that the Fourth Review Conference had welcomed the decision of the AHG to intensify its work with a view to completion of the Protocol as soon as possible before the Fifth Review Conference and went on to say that to achieve this, the EU believes that "it

will be imperative to have completed all the stages necessary to ensure that a Protocol be opened for signature prior to the Fifth Review Conference, which is to be held no later than 2001". The Declaration goes on to say that it will actively promote the work of the AHG "with a view to achieving substantive progress by the end of 1999, so that the Protocol can be adopted by a Special Conference of States Parties in 2000". As usual, the associated countries and other countries aligned themselves with this declaration.

In the last week of the January meeting, there were two formal statements to the AHG. The first, on 19 January, by Jakob Kellenberger, the Swiss Secretary of State for Foreign Affairs, which offered Geneva as a candidate city to host the headquarters of the future BWC organization. In his statement, he said that Geneva offered an ideal platform because of its experiences in hosting international organizations and the presence in the city of numerous Permanent Missions as well as specialized agencies in the fields of disarmament and arms control. Further, he said "a natural functional link exists between the future verification organization and those organizations based in Geneva which deal with the international community's humanitarian, health and environmental concerns". Finally, he noted that Geneva had been the venue for the negotiations of the BWC and for the Review Conferences, VEREX and the AHG.

A day later, the Ambassador Raimundo Gonzalez of the Chilean Ministry of Foreign Affairs also addressed the AHG. He recalled the statement signed on 5 September 1998 in Panama by the 12th Summit of Heads of State and Government of the Rio Group which urged the international community to take immediate steps intended to free the world of nuclear weapons and other weapons of mass destruction. He went on to refer to the Ministerial meeting held in New York on 23 September 1998 and the sense of urgency in its statement. He said that recognising that this was the thirteenth meeting of the AHG:

we consider that time is ripe for giving a new impulse to these negotiations. We reiterate once more our appeal to show a greater flexibility.

He emphasised that:

prevention of the proliferation of biological weapons through effective verification measures and promotion of international cooperation through scientific and technological exchange are two basic requirements for a successful completion of this negotiating process and their due consideration should give way to the political viability of reaching the necessary consensus for adoption of the protocol and subsequent adherence thereto and for its universality.

The Emerging Regime

The distribution of the meetings in the January session shows that most of the time available was spent on compliance measures, the investigations Annex, definitions and on Article X measures.

{For clarity, comments from the author of this article will be contained within curly brackets.}

Compliance Measures The January meeting focused on visits and made good progress in respect of visits both in regard to the language in *Article III. D. Declarations II.*

Follow-up after Submission of Declarations A. Randomly-Selected Visits as well as preparing text on *Declaration Clarification Procedures* (WP.347) which will be discussed at the next AHG meeting. This latter text, although circulated as a UK working paper, represented the result of consultation between the UK, France, Germany, Japan, South Africa and the United States. This language has been incorporated into the rolling text along with alternative language from a Chinese Working Paper (WP.338) replacing all the previous text on clarification visits.

An important decision was to separate Visits and Investigations as these are quite distinct activities with very different purposes. The September/October rolling text had "Visits and Investigations" as a final Section F of *Article III Compliance Measures*. The January rolling text has visits within *II Follow-up after Submission of Declarations* of Section D *Declarations* and has "Investigations" as a final Section G of Article III.

As visits are one of the principal issues being discussed, it is helpful to outline the developments in terminology and to identify which text is the latest version so as to reduce the potential for confusion. The September/October meeting saw development of terminology in Article III for:

Random Visits

Clarification Visits

Request Visits

Voluntary Visits

with language for random visits, clarification visits, voluntary visits and voluntary confidence-building visits. *Annex B Visits* contained text for random visits and clarification visits. In Annex IV, there was strikethrough text for Article III on Random Visits, Clarification Procedures, and Voluntary Request Visits.

The Working Papers distributed at the January meeting included several which related to visits. The South African paper (WP.336) proposed language for voluntary visits, random visits, clarification visits (to declared facilities) and consultation visits (to undeclared facilities to determine whether they should be declared). An Iranian paper (WP.345) reported on a national trial visit and concluded:

The random visit is considered to be a necessary measure within an effective compliance Protocol. The visiting team, with the cooperation of the visited State Party shall be able to validate the accuracy of declarations without interruption of the normal work of the facility.

The January meeting saw negotiations by the Friend of the Chair on visits and the introduction of the term "randomly-selected visits" into the rolling text in place of the previous "random visits". Later in the January meeting, a working paper by Brazil, Chile, New Zealand and Norway (WP.346) proposed language for randomly-selected visits which incorporated language to allow for the implementation, as appropriate, of cooperation and assistance activities during the carrying out of the randomly-selected visits. This has been incorporated into the new rolling text for randomly-selected visits in Article III. The concept that randomly-selected visits could both promote the accuracy of declarations and serve to provide technical assistance and cooperation is one that is well received by the developing countries.

The rolling text that emerged from the January meeting contains language in Article III for:

Randomly-selected Visits {New}

Clarification Procedures and Voluntary Visit/Declaration Clarification Procedures {WP.338/WP.347 respectively}

Voluntary Visits {as in the previous rolling text}

Voluntary Confidence-Building Text {as in the previous rolling text together with new South African text on voluntary visits from WP.336}

Annex B Visits is no more than a compilation of proposed text for randomly-selected visits, clarification visits and consultation visits; however, none of this material on the more detailed aspects of visits has so far been discussed. In Part II there is strikethrough text for Article III on *II Follow-up after Submission of Declarations* which includes Transparency Visits which is a proposed replacement for the current term "randomly-selected visits".

Consequently, at the March/April AHG session negotiations will focus on the language in the rolling text of *Article III for Declaration Clarification Procedures and Voluntary Visits*. Annex B will be amended at a later date to reflect the outcome of the negotiations on the Article III language.

The new rolling text on Randomly-selected Visits incorporates language from Brazil, Chile, New Zealand, Norway (WP.346) setting out that "the primary purpose" of the randomly selected-visits:

shall be to confirm ... that declarations are consistent with the obligations under this Protocol and to promote accuracy of declarations.

It then goes on to say that randomly-selected visits:

shall also implement, as appropriate, technical assistance and cooperation activities or programmes, if requested by the State Party and the facility, as well as enhance transparency of declared facilities and activities ...

It is made clear that:

any provision or implementation of technical cooperation and assistance activities or programmes ... during the visit shall be consistent with achievement of its primary purpose.

New language is included for the selection of facilities. As was pointed out in the South African WP.336, the previous selection formula with each region receiving the same maximum number of 10 visits a year could result in situation where a region such as Africa declaring 20 facilities would have each facility visited every couple of years whilst Western Europe might declare 500 facilities and it would take 50 years for each facility to be visited once. A selection formula for a more balanced distribution was therefore needed. The new formula in the rolling text sets out that:

there shall be no more than [20][50][60][100] randomly-selected visits per calendar year to declared facilities selected randomly by the Technical Secretariat from among all declared facilities.

In selecting facilities to be visited, the Technical Secretariat shall ensure that:

Over a five-year period, such visits shall be divided between each category of declarable facilities in approximate propor-

tion to the total number of declared facilities in each category,

Over a [1][5] year period, no State Party shall receive more than [2][10] such visits,

[Over a five-year period, such visits shall be fairly distributed among regional groups of State Parties [on the basis of the number of declared facilities],]

[Over a five-year period, no facility shall be subject to more than two such visits,]

[The prediction of when any particular facility will be subjected to such a visit will be precluded,]

[The scientific and technical characteristics of the facility to be visited and the nature of the activities to be carried out there may be taken into account.]

The duration of randomly-selected visits is now essentially out of square brackets and states that they “may last up to two days [except in the case of such visits to biodefence capabilities which may last up to three days]”. The size of the visiting team, also now out of square brackets, “shall not exceed four members”. Much of the material relating to randomly-selected visits is now out of square brackets although the entire section is still within square brackets.

Insofar as declaration clarification procedures are concerned, these will be discussed in detail during the March/April AHG session with attention focusing on the language in the rolling text coming from UK WP.347 based on consultation with several nations and from the Chinese WP.338. The WP.347 text makes provision for the Technical Secretariat either at the request of a state party or as a result of its own examination, if it considers there is “any possible ambiguity, uncertainty, anomaly or omission concerning the declaration(s) submitted by a State Party” to submit a written request for clarification to the state party concerned. This shall be provided in writing no later than 20 days after receipt of the request. If within 14 days after receipt of the written response either the state party making the original request or the Technical Secretariat considers that the written response does not resolve the matter, the Technical Secretariat may submit a written request to the state party concerned for a consultative meeting between the Technical Secretariat and representatives of the state party in order to resolve the matter. Such a meeting shall be held no later than 10 days after receipt of the request for such a meeting and its duration shall not exceed 48 hours. Should the consultative meeting not resolve the matter then the Technical Secretariat may propose that a clarification visit be conducted at the facility concerned for the sole purpose of resolving the matter. The requested state party shall advise within 48 hours of receipt of the request whether (a) the clarification visit should proceed as proposed, (b) the proposal for the clarification visit should be submitted to the Executive Council for review at its next regular session, or (c) the clarification visit be declined if the requested state party considers that it has made every reasonable effort to resolve the matter through the consultation procedures. In the last case, the Executive Council shall be so informed by the Director-General within 12 hours of receipt of the response from the requested state party. In addition, the language also makes provision for the requested state party, at its own discretion and at any stage during the clarification

procedures, to invite the Technical Secretariat to make a voluntary visit with a view to resolving the matter which has been raised.

The Chinese alternative proposes that any concern related to a declared facility shall be first sought to be resolved through the process of consultation, clarification and cooperation. The state party to which the concern is related may volunteer for the Technical Secretariat to conduct a visit to the facility in question with a view to resolving the concern.

Declarations There was little detailed discussion of declarations although agreement was reached that declaration formats should be reordered and streamlined. The structure of Article III D Declarations had been clarified with a new heading *I Submission of Declarations* prior to the language specifying what should be declared. Annex IV in Part II contains in FOC/14 a new strikethrough text version for section *I Submission of Declarations* and in FOC/13 declaration formats for current biological defence facilities and for other facilities.

Annex D on Investigations Good progress was also made on the Investigations Annex. The *I General Provisions* section was developed with good progress made in removing square brackets. The previous text in the Annex on privileges and immunities was moved to the appropriate section of *Article IX The Organization*. The first section of the General Provisions entitled *(A) Designation of Investigation Personnel* is now divided into two sections addressing full time investigation personnel and *ad hoc* experts respectively. The language relating to the *ad hoc* experts makes it clear that should the necessary expertise not be available within the Technical Secretariat and *ad hoc* experts are required for a “[field] investigation [of alleged use of BW]” then such experts shall be selected from a designated list by the Director-General. In square brackets, it is stated that an *ad hoc* expert shall not be appointed as an investigation team leader. Provision is also made for the Technical Secretariat to “ensure that all members of the designated investigation personnel are properly trained to conduct such investigations.”

The next section, previously on accreditation of laboratories is now entitled *(B) Designation and Certification of Laboratories*. This sets out that the criteria, including proficiency standards, and procedures required for designation and certification of laboratories shall be approved by the first Conference of States Parties.

As noted in earlier *Progress in Geneva* reports, the Friend of the Chair on the Investigations Annex had provided a working paper (WP.293/Rev. 1) which proposed language changes to address those issues which could be resolved at this stage of the negotiations and thus moved forward this section of the Protocol towards a clean text with square brackets around the more fundamental issues. This paper was taken forward in the January AHG session as FOC/8 which includes strikethrough text for the following Sections: *I General Provisions*, *II [Field] Investigations [of alleged use of BW]* and *III [Facility] Investigations [of Any Other Alleged Breach of Obligations under the Provisions of the Convention]*.

Language was incorporated within square brackets into *Article III G. Investigations (A) Initiation and Types of Investigations* which came from WP.339 by China, Cuba, India, Indonesia and Pakistan and states that “All natural outbreaks of disease do not pose a compliance concern to the Convention and therefore shall not be a cause for an investigation of a non-compliance concern. The diseases that are endemic in the region and present the expected epidemiological features shall not be considered as an unusual outbreak of disease.” A new Section *V Investigations of Natural and Unusual Outbreaks of Disease* within square brackets has been added to Annex D which states that “for the purposes of this Protocol, an unusual outbreak of disease may have one or more of the following reasons: ...” and provides a list of 12 such reasons.

Definitions Progress was made on *Annex A II. List of Equipment* which was reduced from 10 to 7 pages with most of the previous alternative language being deleted and a number of square brackets being removed. Insofar as *Article II Definitions* is concerned, these were reordered following a proposal by the Russian Federation into three categories: *Category I: For the Purposes of this Protocol*, *Category II: [Definitions to be inserted in] [for the purposes of] Article III [, Section D on Declarations]* and *Category III* (which states that these definitions can be moved to the appropriate sections of the Protocol after discussion). Some progress was made in consolidating language from alternative definitions into a consolidated definition which can form the basis for subsequent negotiation.

BWC Article X Measures The new Friend of the Chair (Carlos Simas of Brazil) succeeded in obtaining a more detailed and open debate and achieved a significant change to the title of Article VII which became *Scientific and Technological Exchange for Peaceful Purposes and Technical Cooperation* which is free from all square brackets and has deleted the words “Implementation Assistance” which had created much NAM concern when these were introduced in the March 1998 AHG meeting (see *Progress in Geneva No 3*, CBWCB 40, June 1998). Some slight changes were made to Sections *(A) General Provisions* and *(B) Measures to Promote Scientific and Technological Exchanges*. An additional alternative for the opening paragraph of the General Provisions was incorporated as *1ter* into the rolling text as a possible replacement for paragraphs 1 and *1bis*. Much of the debate related to how to find wording which makes it clear that the benefits accrue to those states which accede to the Protocol.

Two working papers were submitted by the NAM and Other Countries (WP.349 and WP.350). The first proposed that a Cooperation Committee should be established to coordinate and promote effective and full implementation of Article X of the Convention and Article VII of the Protocol and outlined its powers and functions. The second proposed language for information to be provided in declarations of the implementation of Article X. The language from these two papers has been incorporated into Article VII and a new Appendix E respectively.

The Friend of the Chair in a paper (FOC/11) in Annex IV in Part II sets out some ideas intended to help the debate

on how to address certain substantive issues in the draft Article VII.

Organization/Implementational Aspects A significant development was the Russian Federation working paper WP.341 which addressed the organization for the implementation of the Protocol. This meant that brackets around the terms [Organization] and [Executive Council] could now be removed enabling the text of Article IX to be improved throughout. The title of the Article also was agreed as “The Organization” instead of the previous “[The Organization] [and Implementational Arrangements]”.

Section *(E) Privileges and Immunities* was extended and developed in the light of proposals made in an Austrian working paper (WP.351) and the transfer of language previously in *Annex D Investigations* into Article IX.

In addition, Annex IV in Part II contains strikethrough text produced by the Chairman for further consideration of Article IX.

Confidentiality Some progress was made with the deletion of square brackets and the deletion of some text from *Article IV Confidentiality Provisions* and *Annex E Confidentiality Provisions*. These are now becoming reasonably clear of square brackets. In addition, the Friend of the Chair has produced transparent proposals in FOC/10 in Annex IV for further consideration for both Article IV and Annex E.

National Implementation & Assistance There was some progress with *Article VI Assistance and Protection against Biological and Toxin Weapons* in regard to the conditions under which a state party has the right to receive assistance which now reads:

- (a) Biological or toxin weapons have been used against them; {unchanged}
- (b) It is threatened by imminent actions that are prohibited [for States Parties] by Article I of the Convention; {amended by insertion of “imminent”}
- (c) [It has credible reason to believe] it is confronted by imminent actions or [elevated] threat with respect to actions that are prohibited [for States Parties] by Article I of the Convention; {new}

Square brackets were removed from paragraphs 9 and 10 as well as from parts of the text in the Article. There was no progress in relation to *Article X National Implementation Measures* where the outstanding point of substance remaining within square brackets is that relating to the requirement for the enactment of penal legislation.

Legal Issues Progress continued to be made with consideration of Articles V, XI, XII and XIV with the removal of square brackets and the streamlining of text. A new paragraph *5bis* was added, in square brackets, to *Article XIV Amendments* as an alternative to the existing text in paragraph 5 on technical and administrative changes which closely mirrors that in the CWC. The new paragraph *5bis* addresses amendments only to the list of agents and toxins contained in Annex A and states that (a) the criteria for inclusion or exclusion of an agent or toxin be agreed by the first Conference of States Parties, (b) proposed additions or

deletions be submitted with supporting documentation and evaluation to the Director-General who shall communicate the proposal to all states parties, and (c) the first following Conference of States Parties shall consider the proposed addition or deletion. These will be adopted by a positive vote of a majority of all states parties present and voting, with no state party casting a negative vote.

Seat of Organization The recently appointed Friend of the Chair (Ambassador Hayashi of Japan) had half a meeting on the Seat of the Organization. As already noted above, Switzerland made a formal proposal that Geneva should be the seat of the BWC Organization. In addition, the Netherlands indicated its interest in hosting the future organization in The Hague. The Friend of the Chair prepared a paper (FOC/12) in Annex IV which notes that:

Switzerland proposed Geneva as a candidate city to host the headquarters of the future Organization, and the Netherlands declared its interest in hosting the future Organization in The Hague and expressed the hope that it would be able to present a comprehensive and concrete offer in the near future.

Preamble The recently appointed Friend of the Chair (Malik Ellahi of Pakistan) had half a meeting on the Preamble. The text in the rolling text was unchanged pending a merged version of the existing language.

Prospects

The January meeting also saw the agreement of the programme of work for the two-week fourteenth session to be held on 29 March to 9 April. This session is made even

shorter by three holidays within the period thus reducing the number of meetings to 14. These were allocated as follows:

Compliance measures	5.3
Investigations annex	4
Article X	3
National Implementation	0.5
Preamble	0.3
Seat	0.3
Ad Hoc Group	0.5
Total	14

Overall, the January meeting saw encouraging progress in all areas of the draft Protocol. Although there are still key points in most areas that will not be resolved until the final few meetings, there are several areas in which the text is relatively free from square brackets — legal issues, confidentiality, assistance and national implementation, the Annex on Investigations — and real progress is being made on compliance measures, Article X measures, definitions and the organization. Overall, the prospects for 1999 are promising with all delegations actively engaged.

Since the last *Progress in Geneva* there has been a further meeting at which the importance of the strengthening of the BWC has been emphasised. A NATO Advanced Research Workshop lasting three days was held in Moscow from 9 to 11 December 1998. This addressed the scientific and technical basis for strengthening the BWC through a legally binding Protocol and involved some 44 experts from 16 countries. It was particularly valuable as it enabled informal yet informed technical debate about key issues that need to be resolved to achieve an effective and cost-efficient Protocol to strengthen the BWC.

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

News Chronology

November 1998 through February 1999

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

November North Korea has the third largest chemical-weapons capability in the world, according to a military commentator writing in the Seoul monthly *Pukhan* {in FBIS-EAS 21 Nov 98}, which specializes in North Korean affairs. Much further purported detail about North Korean CBW preparations, including the use of political prisoners for experimentation with CBW agents, is presented in the article, which, however, neither identifies the provenance of its information nor otherwise indicates its reliability.

1 November In Washington, President Clinton and Israeli Prime Minister Benjamin Netanyahu sign a memorandum of agreement that commits the United States to enhancing Israel's "defensive and deterrent capabilities" and to engaging in prompt consultations about what support or assistance, "di-

plomatic or otherwise", it could provide in the face of "direct threats to Israel's security arising from the regional deployment of ballistic missiles of intermediate range [500 km] or greater". The agreement had been reached during the previous month at the Wye River summit, where Israel and the Palestinian Authority signed an interim security agreement. {*New York Times* 2 Nov}

1 November The US Air Force study that is tracking the health of veterans of Operation Ranch Hand — the Air Force unit responsible for aerial spraying of Agent Orange and other chemical herbicides during the Vietnam war — is characterized as "so flawed that it might be useless" by the San Diego *Union-Tribune* {1 Nov} after a six-month investigation based on interviews with Richard Albanese, a civilian doctor at Brooks Air

Force Base. Dr Albanese had been one of the four scientists who originally designed the study, which he had headed until 1984. The study [see 29 Mar 91] had begun in 1978 and is due to end in 2006; it is monitoring the health of about a thousand Ranch Hand veterans and a similarly sized control group of Air Force personnel not associated with the operation. Dr Albanese is quoted as saying that the study has been manipulated to downplay the health problems of Vietnam veterans. Senate Minority Leader Tom Daschle announces that he will be seeking a \$2–4 million Congressional appropriation for independent research into the matter, possibly in the form of help for the Air Force study from the National Academy of Sciences {San Diego *Union-Tribune* 19 Nov}. Representative Bernard Sanders, the Vermont independent, later calls for Congressional hearings on the newspaper allegations, both for the information of veterans and their families and in order to provide opportunity for the Air Force to respond {San Diego *Union-Tribune* 3 Dec}.

2 November The OPCW Technical Secretariat states that 82 of the 119 member states have now provided information, as required under CWC Art VII.4, on their National Authorities. {*OPCW Synthesis* Nov}

2 November The US Army Project Manager for Non-Stockpile Chemical Materiel, Col Edmund Libby, announces that more than 142,000 M687 155-mm binary chemical munitions have now been demilitarized through recycling at Hawthorne Army Depot, Nevada. The munitions are held, at Umatilla and Tooele, with uploaded M21 canisters of OPA. A total of 201,728 rounds are scheduled for processing during this initial phase of binary chemdemil, which began in November 1997, and which will leave 56,820 rounds for a subsequent phase. The M20 canisters of DF that would complete the munitions are held separately at Pine Bluff Arsenal and will be destroyed in due course. {PR Newswire 2 Nov} The US initial declaration to the OPCW under Article III of the CWC specifies holdings of 56,820 M20 canisters at Pine Bluff Arsenal, 17,220 M687/M21 rounds at Tooele and 241,328 M687/M21 rounds at Umatilla. The last consignment of the first-phase rounds, all of which have been drawn from the Umatilla stockpile, leaves for Hawthorne on 14 December {AP from Hermiston 15 Dec}.

3 November Iraq has an arsenal of CBW weapons hidden from senior ministers, even including Deputy Prime Minister Tariq Aziz, according to a defector quoted in the London *Guardian* {3 Nov}, Abbas al-Janabi, who had worked for Uday Hussein for 15 years until defecting some nine months previously. An unidentified “recent defector” quoted ten days later in the London *Financial Times* {12 Nov} speaks of the secret Iraqi committee that is charged with hiding retained missiles and CW agents, documents from the biological weapons programme, and details of key personnel; a committee of which Tariq Aziz is reportedly a member.

3 November The *New York Times* science section carries a profile of William C Patrick III [see 25 Feb], who headed Product Development in the former US biological weapons programme.

3 November In the UN General Assembly, the First Committee adopts three resolutions that address CBW disarmament and arms control. A resolution on the BWC calls for acceleration of the Protocol negotiation. It is adopted by consensus. So is a resolution on implementation of the CWC, but with Egypt, Libya and Yemen remaining outside the consensus be-

cause one of the operative paragraphs of the resolution calls for universal adherence to the treaty, which, they say, is not possible while Israel continues to possess nuclear weapons. The third resolution, on *Measures to Uphold the Authority of the 1925 Geneva Protocol*, calls for withdrawal of all remaining reservations to the Protocol. It is adopted by a vote of 136–0 with Israel, South Korea and the United States abstaining. The full General Assembly adopts all three resolutions on 4 December as A/RES/53/84, A/RES/53/77R and A/RES/53/77L, respectively. {*Disarmament Diplomacy* Nov}

4 November In Moscow, a public forum on *Russia's Problems in CWC Implementation* is convened by Green Cross Russia [see 26–27 May]. Participants include governors, administration heads of regions where stockpiles of chemical weapons are located, federal government officials and representatives of public organizations”.

4 November In New York, a US federal grand jury issues an indictment against Usama bin Laden [see 20 Aug] alleging that he and others engaged in a long-term conspiracy to attack US facilities overseas and to kill Americans. The 238-count indictment states that at “various times from at least as early as 1993 Usama Bin Laden and others known and unknown, made efforts to produce chemical weapons”. {*Washington Post* 5 Nov, *USIS Washington File* 6 Nov}

4–5 November In St Lucia, the government in collaboration with the OPCW Technical Secretariat organizes a regional seminar on the Chemical Weapons Convention {*OPCW Synthesis* Nov}. Held in Castries, it is attended by representatives of eight states parties (Canada, Cuba, El Salvador, Guyana, Panama, Suriname, St Lucia and Trinidad & Tobago), eight other signatory states (Bahamas, Dominica, Grenada, Guatemala, Haiti, Jamaica, St Kitts & Nevis and St Vincent & the Grenadines), and one non-signatory (Antigua & Barbuda). The Secretariat of the Organization of Eastern Caribbean States and its Brussels embassy are also represented. {*CBWCB* Dec}

4–7 November In the Czech Republic, the Illinois Institute of Technology Research Institute convenes its third international workshop on chemical and biological agents [see 6–8 Aug 97] jointly with Brno Technical University Institute of Chemistry. The meeting is co-chaired by Dr K S Rajan of IIT and Prof Jiri Matousek. Some 20 papers are presented in the scientific programme, on various aspects of CB-agent detection, decontamination, protection, toxicology and treatment. {*ASA Newsletter* 19 Feb}

5 November The OPCW Technical Secretariat issues a review of the status of analytical support for OPCW verification activities. This informs member states that “the use of sampling and analysis as an effective and independent OPCW inspection tool has yet to be realised”. This, it says, is because of “an unfortunate combination of several factors”, which it lists as follows: “the limitations built into the technical specifications of on-site analytical equipment to protect confidential business information not related to compliance with the Convention (‘blinding’); the small number of analytical reference spectra approved for inclusion in the Central OPCW Analytical Database ... [in fact spectra for only a very small fraction of the chemicals covered by the Schedules]; the unwillingness of some Member States to accept the inclusion into that database of reference spectra for chemicals other than scheduled chemicals and their derivatives; uncertainty about whether it would actually be possible to transport samples collected by inspection teams by

means of commercial aircraft; the very limited availability of sound alternatives to chemical on-site analysis in the form of suitable NDE equipment; the problems associated with the use of analytical equipment belonging to the inspected State Party as an alternative to analysis conducted by the inspection team on site or by designated laboratories off site; the emerging tendency in some States Parties to perform analysis themselves, without validation; and, in relation to the United States of America, a reservation prohibiting the removal of samples from its territory". The Secretariat paper doubts whether "the drafters of the Convention would have envisaged the emergence of such a situation". It sets out detailed recommendations for retrieving the situation. {S/81/98*}

5 November In Washington, the Office of the Special Assistant to the Deputy Secretary of Defense for Gulf War Illnesses [see 4 Aug] issues two new reports. One is an environmental exposure report on the smoke from burning oil-wells to which US troops were exposed. The findings from this investigation and the associated literature-review by the Rand Corporation indicate that the levels of toxicant in the smoke were not high enough to cause short or long term health effects. {GulfLink 5 Nov} The second report is a case narrative assessing the 18 incidents during the Gulf War in which chemical alerts were recorded by the 11th Marines, an artillery regiment. The report concludes that, in each case, it was "unlikely" that chemical agent had in fact been present. Dr Bernard Rostker, the Special Assistant (now nominated as Under Secretary of the Army), says: "In retrospect, it is clear that fallout from the oil well fires could affect detection equipment and could have caused many of the chemical alerts recorded by the 11th Marines". {DoD news release 5 Nov}

6 November The US Department of Energy is considering building at least three biological facilities for analysis of possible BW-agent samples, including rapid identification of any pathogens they may contain. The facilities would contribute to federal anti-terrorist effort, which the Congress is now funding at a rate of about \$3 billion per year. They would be built to Biosafety Level 3 containment standards at Los Alamos, Lawrence Livermore and Oak Ridge National Laboratories. The Los Alamos facility would be directed by molecular biologist Paul Jackson, whose DNA analyses of samples containing dead anthrax bacteria have attracted widespread notice [see 3 Feb]. {*Albuquerque Journal* 6 Nov}

9–10 November In Washington, at the Woodrow Wilson Center, there is a conference, *The Toxic Legacy of the Cold War in the Former Soviet Union: Assessing Conditions, Finding Solutions*, cosponsored by the Environmental Change and Security Project, the Kennan Institute for Advanced Russian Studies, and the Cold War International History Project. One of the presentations is by Dr Lev Fedorov [see 4 Aug], who states that the USSR discarded at least 120,000 tonnes of CW agents during the 1940s through the 1980s, the environmental and public health impacts of which continue to this day. He has prepared, and subsequently distributes, a long paper for the conference, setting out detailed information on the production, storage and destruction of chemical weapons in the USSR. Some of this information, notably figures for Soviet production of CW agents during 1941–45, differs slightly from earlier renderings by him of the same information [see, for example, 8 Dec 93]. Asked about his sources when interviewed subsequently for *Trud* {13 Jan in BBC-SWB 23 Feb}, he says: "The state isn't yet ready to declassify these figures, which are still treated as military information. Were I to try to give a precise answer to your question,

the Pasko case would certainly be followed by the Fedorov case, meaning that I can't tell you now where I learnt these figures. I can only give you my word of honour that I saw the documents in question with my own eyes."

10 November In Moscow, the slow progress of the Russian chemdemil programme is the subject of a press conference marking the anniversary of Russian ratification of the Chemical Weapons Convention. Natalya Ivanovna Kalinina [see 14–16 May 96] reviews the administrative and practical difficulties involved. She speaks also of the value of the work done by NGOs, above all Green Cross Russia [see 4 Nov], in educating the population and in monitoring its health and that of the environment at stockpile locations. Alexander Alexeyevich Pikayev, director of the WMD Reduction and Non-Proliferation Program at the Moscow Carnegie Center, notes among other things the continuing absence of the additional chemdemil assistance promised by European countries prior to the ratification action by the Russian Federal Assembly. He raises the matter of the outstanding \$140 billion Russian debt to Western countries on loans and credits initiated during the final years of the Soviet Union, on which \$17.5 billion is due from Russia in 1999. He says: "I think that it would be good if in the course of these inevitable [new debt rescheduling] talks the question was raised of directing a part of the debt payments to the Paris Club for the solution of chemical disarmament problems in Russia. First of all, this money should be directed at implementing the chemical disarmament program because it requires the biggest sums. According to official figures, this program will cost Russia more than 6 billion dollars over a period of ten years. No doubt about it, Russia cannot cope with such spending. This sum can be obtained only through restructuring Russia's foreign debt, primarily its debt to the Paris Club." {FNS transcript 10 Nov}

The presidential press service announces next day that President Yeltsin has told Prime Minister Yevgeniy Primakov "to step up work to attract Russian and foreign investments in the construction of plants where chemical weapons will be disposed of" {Interfax 11 Nov in FBIS-SOV 11 Nov 98}.

10 November The US Central Intelligence Agency reaffirms the assessment of Iraqi capability in weapons of mass destruction (WMD) it had made in a 24 July written response to questions from the Senate Intelligence Committee [see 14 Sep]. The CIA response had included the following: "On the basis of remaining gaps and inconsistencies in Iraqi declarations to the UN, we assess Iraq could retain a small force of Scud-type missiles, a small stockpile of chemical and biological munitions, and the capability to quickly resurrect WMD production absent UN sanctions and UNSCOM and IAEA monitoring. ... Absent inspections, Baghdad could restart limited production of the blister agent mustard within a few weeks, full scale production of sarin within a few months, and pre Gulf War production levels — including VX — within two to three years. ... Iraq is capable of restarting BW agent production virtually overnight at facilities that currently produce legitimate items, such as vaccines. ... If sanctions were lifted and inspections ceased, Iraq could resume production of Scud-type missiles perhaps within one year." {AFP from Washington 10 Nov}

10 November In Washington, a seminar on *New Evidence on the Allegations of the Use of Biological Warfare during the Korean War* is sponsored by the Woodrow Wilson Center Cold War International History Project. The presenters are Milton Leitenberg, who describes how recently discovered documents of the Politburo of the USSR Communist Party dating from

1952–53 show the BW allegations to be contrived and fraudulent [see also 8 Jan], and Kathryn Weathersby, who considers the documents in the context of relations at the highest levels between Moscow and Beijing and of the post-Stalin struggle for power in Moscow. They caution that the record displayed by the documents — which comprise a fragment of a 21 February 1952 message, and 11 documents from the 50-day period commencing 13 April 1953 — is far from a complete history of the events. Although in their view the papers show the entire episode of germ-warfare allegation to be false, they say that more evidence is needed if the actual roles of the USSR and China are to be established.

The documents include reports of internal Politburo investigations, as well as messages from the Politburo to Mao Tse Tung and Kim Il Sung, and their replies.

10 November In Panama, the Ministry of Health and US Army-South initiate a joint seminar programme to train Panamanian citizens living in communities adjacent to former US military training areas in how to deal with accidental discovery of live ordnance. Under the 1977 Panama Canal treaty governing US handover of the canal, the US had undertaken to clear unexploded ordnance from areas it had occupied, insofar as that was “practicable”. The US has decided that, for 3171 hectares, it is not practicable. {DoD release 10 Nov} Abandoned chemical weapons are present [see 31 Jul] although reportedly they have not been declared to the OPCW {*Progressive Dec*} as they should have been, if they were indeed present, in accordance with CWC Art III.1(b)(iii). The Panamanian Foreign Ministry states that 21 Panamanians have been killed by unexploded ordnance, and 200 injured, over the past two decades {NPR 22 Nov}. *La Prensa*, in its issue of 24 September, had quoted the Panamanian co-director of the joint clean-up task force, Fernando Manfredo, as follows: “It is unacceptable for us that they leave without removing threats to life, health and human security”. A US official in Panama City, who had asked not to be identified, was then quoted thus: “Panama’s complaint about the firing ranges is like someone receiving a Mercedes and complaining there are ashes in the ashtray”. {Reuter from Panama City 25 Sep}

10–13 November The OPCW Technical Secretariat holds a workshop on declarations for states parties in the African region. The workshop, held in The Hague, aims to provide participating National Authority personnel with a framework for sharing experience on implementing the CWC declaration requirements and for receiving assistance in meeting CWC obligations. The workshop is opened by the director of the division of the Secretariat dealing with international cooperation and assistance, Dr John Makhubalo. {OPCW release 5 Nov}

11 November From Vienna, IAEA Director General Mohamed ElBaradei, after consultation with the UN Secretary-General, announces his decision to “temporarily relocate all IAEA inspectors currently in Baghdad to Bahrain due to concern for their safety in view of the escalating situation in Iraq”. UNSCOM Executive Chairman Richard Butler is likewise withdrawing UNSCOM personnel. {UN press release 11 Nov} In Israel next day, the army opens 66 distribution centres for civilian antigas kits, even though Defence Ministry Director-General David Ivry says that the “likelihood of an Iraqi attack on Israel is next to zero” {AFP from Jerusalem 12 Nov}. US/UK military preparations for an attack on Iraq [see 31 Oct] now seem far advanced {London *Guardian* 13}.

12 November Indonesia deposits its instrument of ratification of the Chemical Weapons Convention [see 29 Jun]. In 30 days time, it will thereby become the 121st state party to the treaty.

12 November From Doha, the foreign ministers of Bahrain, Egypt, Kuwait, Oman, Qatar, Saudi Arabia, Syria and the United Arab Emirates issue a declaration which urges Iraq to reconsider its decision to end UNSCOM’s work. The ministers “stressed that the Iraqi government was responsible for any complications resulting from the fact that it has not reconsidered its decision, a matter which exposes the innocents from the Iraqi people to further ordeals and tragedies”. {KUNA 12 Nov in *BBC News* 13 Nov}

12 November In the UK, BBC television begins a 6-part documentary series on *Science at War*, the initial part addressing chemical warfare. Part 2, a week later, is on biological warfare.

12 November The UK Defence Ministry publishes the terms of reference of the Independent Panel it had established in September 1997 to oversee its ‘interactions’ research programme into Gulf War illnesses — the investigation at CBD Porton Down of the possible health effects of combinations of the different anti-CBW vaccines and drugs that had been administered to service personnel during that war [see 14 Jul 97]. {*Hansard (Lords)* written answers 12 Nov} A new panel chairman is later appointed: Professor Donald Davies of Imperial College School of Medicine. {*Hansard (Commons)* written answers 18 Jan}

12 November The US General Accounting Office transmits to the Congress its report on the Nunn–Lugar–Domenici Domestic Preparedness Program [see 2 Oct], which it has reviewed in detail. The report recommends ways for improving the focus and efficiency of the programme, noting that opportunity for doing so is still open. This is because the Defense Department is only about one-third of the way through its programme for training 120 US cities in how to respond to terrorist weapons of mass destruction. It is also because, as the report puts it, “the FBI and the intelligence community conclude that conventional weapons will be terrorists’ weapons of choice for the next decade”. {GAO/NSIAD-99-3}

12 November President Clinton extends for another year the national emergency he had originally declared in 1994 with respect to the “unusual and extraordinary threat to the national security, foreign policy, and economy of the United States posed by the proliferation of nuclear, biological, and chemical weapons ... and the means of delivering such weapons”. He also transmits to the Congress a formal report on measures taken by his administration over the past to respond to the threat. Here he notes that the Chemical Weapons Convention includes a provision “specifically designed to penalize in a concrete way countries that refuse to join the rest of the world in eliminating the threat of chemical weapons”, continuing: “We anticipate rapid promulgation of US regulations implementing these CWC trade restrictions.” {*USIS Washington File* 12 Nov}

13 November President Yeltsin sends a message to President Clinton in which he states that Moscow firmly supports “acceleration of work on the Protocol meant to strengthen the 1972 Convention on [the] Prohibition of Biological Weapons” [see also 2 Sep]. {*Istar-Tass* from Moscow 13 Nov}

14 November Iraq declares its willingness to resume coöperation with UNSCOM. This is conveyed by letter from

Deputy Prime Minister Tariq Aziz to UN Secretary-General Kofi Annan, and subsequently clarified in a letter from Iraqi UN ambassador Nizar Hamdoun to Security Council president Peter Burleigh. Britain and the United States recall their strike forces [see 11 Nov Vienna] which, it subsequently transpires, had already been ordered into action against Iraq. {London *Observer* 15 Nov}

The members of the Security Council next day issue a consensus press statement in which they note that this Iraqi declaration “constitutes a rescinding of the decisions of 5 August and 31 October, and that Iraq’s cooperation with the Special Commission and the IAEA will allow the return of inspectors to resume all their activities on an immediate, unconditional and unrestricted basis, in accordance with the relevant resolutions and with the MOU of 23 February 1998”. The statement also says: “Council members reaffirmed their readiness to proceed with a comprehensive review, once the Secretary-General has confirmed, on the basis of reports from the Special Commission and the IAEA, that Iraq has returned to full cooperation, on the basis of resolution 1194 (1998) [see 9 Sep] and the Council President’s letter of 30 October to the Secretary-General [see 31 Oct]”. {AFP from the UN 15 Nov}

British and US leaders then issue statements indicating that their forces would remain on alert until the compliance of Iraq with its undertakings was assured, and that they would strike without warning if the undertakings were broken. {AP from Washington 15 Nov, London *Financial Times* and *Daily Telegraph* 16 Nov, DoD News Briefing 16 Nov}

16 November OPCW Director-General José Bustani announces the seven laboratories which, on the basis of the criteria approved by the Conference, he has decided to designate for the analysis of authentic samples as part of the OPCW verification regime. Besides the Finnish Institute for Verification of the Chemical Weapons Convention, they comprise CW defence laboratories in China, the Netherlands, South Korea, Sweden, Switzerland and the United States. {S/84/98}

This announcement comes at the end of the address by the Director-General to the Conference of the States Parties at the start of its Third Session. Earlier in the address he has reported achievements by his organization: “The effective and multilateral verification of compliance with the Convention’s obligations has been the central task of the OPCW. In the area of chemical weapons, the regime established has allowed us to undertake the inspection of all the declared facilities in accordance with the provisions of the Convention. Eleven of the 59 declared chemical weapons production facilities (CWPFs) have already been certified as destroyed, and the conversion, for peaceful purposes, of another two CWPFs has been approved by the Conference of [the] States Parties. At the moment we have under the Convention’s verification regime: 48 chemical weapon production facilities; 34 chemical weapons storage facilities, containing between them eight million chemical munitions and more than 25,000 bulk containers filled with chemical agent; five operating chemical weapons destruction facilities; and 45 sites declared as containing old or abandoned chemical weapons.”

On industry controls he says: “During 1998 the Secretariat was able to step up its verification activities in the chemical industry. Contrary to some initial fears, this progressed largely without incident. More than 100 chemical industry-related facilities in 25 States Parties have so far been inspected. The level of cooperation extended to inspectors by the inspected States Parties has been extremely high. Both sides have learned much during these first 18 months, and the chemical industry’s initial apprehension has increasingly given way to a sense of

mutual confidence.” Referring to failure of the United States yet to submit its industry declaration [see 12 Nov President Clinton], he continues: “It is an open secret that, for some national chemical industries and their respective governments, the first experience of industry verification was less than satisfactory, not because of the quality of the inspections which they received, but due to the uneven application of the verification regime across States Parties. In the interests of the Convention, it is imperative that this situation be redressed as soon as possible, and I believe that there are now good chances that this will happen. Nevertheless I cannot escape a feeling of uneasiness in relation to what appears to be the temptation, on the part of some States Parties, to use this current situation to place artificial limits on the number of industry inspections. ... I would ask them not to hold the verification regime of the Convention, and the OPCW Programme of Work and Budget, hostage to this issue.” {C-III/DG.12}

16 November The US representative to the OPCW, Ambassador Ralph Earle, speaks about US implementation of the CWC [see 5 Nov OPCW and 16 Nov OPCW] in a statement to the Conference of the States Parties, warning that submission of the US industry declarations “cannot happen overnight”: “There are mandatory legal requirements that must be met. For example, we must allow 30 days for public comment on proposed domestic regulations that implement CWC requirements. In addition, there is a Congressional review period after the regulations are in final form. After that, industry will need a period of time to submit its data. This burdensome and time-consuming process could only be initiated after enactment of the legislation [see 19 Oct]. Nevertheless, the United States administration is continuing to seek various ways to accelerate this process, and we are committed to fulfilling our reporting obligation as promptly as possible.”

Ambassador Earle continues: “I would be remiss if I did not also address criticism that has been leveled at our implementing legislation, regarding sample analysis, the national security exception and concentration declaration thresholds for certain commercial chemicals. With regard to sample analysis, the United States is consulting with other states parties and the Technical Secretariat on an approach for off-site, in-country analysis that will ensure analytical integrity and be fully compatible with CWC obligations. As domestic legislation, the national security exception does not, in itself, have any international legal effect. The United States is confident that in practice this provision will not lead to circumstances in which member states would find the US in noncompliance. Finally, we believe the legislation’s eighty percent declaration threshold for concentrations of certain chemicals will not fundamentally affect the verification regime.” {Text from US delegation.}

16 November The US National Intelligence Council revises existing intelligence-community estimates of the chemical weapons which Iraq could, on the evidence available, have produced and for which UNSCOM has not yet been able to account [see also 10 Nov US]. According to a paper subsequently published by Anthony Cordesman of the Center for Strategic and International Studies in Washington {*The Iraqi Threat After Desert Fox* 22 Jan on www.csis.org}, the revised figures are as follows: 300 tonnes of VX nerve gas, 200 tonnes of sarin, 200 tonnes of mustard gas (all of these figures including both weaponized and bulk-stored agents), 2–25 missile warheads, 15,000–25,000 rockets, 2,000–8,000 aircraft bombs, 15,000 artillery shell and an unknown number of aircraft spraytanks.

16–18 November In California, the Hoover Institution on War, Revolution and Peace at Stanford University convenes a conference on chemical and biological weapons. Participating are more than a hundred specialists from the Departments of Justice and State, the CIA and universities around the country. The theme is that the CBW threat is increasing and is now menacing the shores and heartland of the United States; new ways of responding must be found. {*San Francisco Chronicle* 18 Nov, *USIS Washington File* 20 Nov}

16–20 November In The Hague, the Conference of the States Parties to the Chemical Weapons Convention reconvenes [see 1–5 Dec 97] for its third session. Participating are representatives of 96 of the 120 states parties, one contracting state (Indonesia), 15 signatory states and two non-signatory states (Eritrea and Libya), as well as two international organizations and eight non-governmental organizations: 512 people in all.

One of the main items on the conference agenda is the approval of the programme and budget for the coming calendar year. Despite the intensive negotiations conducted by Friend of the Chair Hendrik Regeur of the Netherlands in the run-up to this session of the CSP, final consensus had not been achieved on a number of component issues, of which two have proved particularly contentious: the creation of new fixed-term posts within the Technical Secretariat, and the distribution of inspections to Schedule 2 plant sites [see 16 Nov OPCW]. The conference therefore now has to spend a great deal of time on organizational and administrative issues. After negotiations reaching into the small hours of the morning, the conference finally approves a budget for 1999. This amounts to NLG 137.748 million, of which NLG 108.04 million will be covered by contributions from member states. The remaining NLG 29.708 million is miscellaneous income which includes interest payments, reimbursements from possessor states for inspections under Articles IV and V including payments in kind, and funds from the host country.

As required by the Convention, the 1999 budget is divided into two chapters. The first relates to administrative and other costs and amounts to NLG 60.5874 million, while the second chapter relates to verification costs and totals NLG 77.1606 million. Following much negotiation among states parties, the budget provides for 496 fixed-term posts within the Technical Secretariat, an increase of 5 on 1998. Four of these new fixed-term posts are in the general service category and one is in the professional category. According to the budget, the Technical Secretariat expects to be able to carry out 300 inspections and visits in 1999, of which 188 will be to chemical-weapons-related facilities, 17 will be to Schedule 1 facilities, 88 will be to Schedule 2 plant sites, and 7 will be to Schedule 3 plant sites. Reflecting the desire of a number of states parties to restore some balance to the burden of chemical industry inspections, of the 88 Schedule 2 inspections due in 1999, 50 are reserved for plant sites in states parties which had not declared such sites as of 20 November 1998 and will not be carried out in other states parties.

The Conference takes a number of decisions on unresolved issues worked upon solely by facilitators under the CoW. One is a procedural decision on the meaning of “production by synthesis” in Part IX of the Verification Annex. Under this decision the CSP tasks the Scientific Advisory Board with addressing, purely from a scientific and technical aspect, the qualitative and quantitative implications of the issue in relation to their impact on declarations and inspections.

The delegations of Iran, Cuba and Pakistan submit a draft resolution on the fostering of international cooperation for

peaceful purposes in the field of chemical activities. The resolution calls for all states parties to complete the review of their existing national regulations for chemical trade and to report to the fourth session of the CSP, emphasising particularly any arrangements between states parties which would restrict or impede trade and the development of scientific and technological knowledge. The resolution requests the Director-General, in consultation with states parties, to strengthen international cooperation through the development of effective programmes aimed at assisting developing countries. The resolution also invites all states parties to report to the CSP on the implications of restrictions on trade and development which originate in parallel regimes outside of the Convention. The CSP defers consideration of this matter to the Council for it to report back to the CSP at its fourth session. {*CBWCB* Dec}

17 November Iranian Foreign Ministry Director General Mohammad Alborzi, addressing the Conference of the States Parties to the Chemical Weapons Convention [see 16–20 Nov], speaks of his country’s declarations under the Convention, submitted today, which “include information concerning capabilities that were developed during the last years of the war”:

“Faced at the time with continued and expanding use of chemical weapons against our soldiers and civilians alike, and persistent muteness and inaction on the part of the United Nations Security Council, Iran was left with no alternative but to seek an effective means of deterrence in the hope that it could halt or at least limit the barrage of these barbarous weapons on its people. This particularly became an absolute necessity when threats were made of chemical bombardment of the cities in the final stages of the conflict, and some indeed were carried out against civilian centers as reported by United Nations investigating missions.

“In this context, the decision was made that, on a strictly limited scale, capability should be developed to challenge the imminent threat particularly against the civilian populated centers. We declared, at the time, that Iran had chemical weapons capability, while maintaining the policy not to resort to these weapons and rely on diplomacy as the sole mechanism to stop their use by its adversary. The war ended soon after. Following the establishment of cease fire, the decision to develop chemical weapons capabilities was reversed and the process was terminated. It was reiterated consequently that Iran would not seek or produce chemical weapons and would accelerate its efforts to ensure early conclusion of a comprehensive and total ban under the CWC. This has continued to be my government’s policy ever since.” {Text from Iranian delegation}

17 November The OPCW Director-General issues a revision of his Note of 11 June [*q.v.*] on the matter of compliance with CWC Article VII {C-III/DG.1/Rev.1}. Also issued by the Technical Secretariat is a survey of national implementing legislation, prepared by the Office of the Legal Adviser {S/85/98}. As of 11 November, only 40 of the 119 states parties were in compliance with CWC Article VII.5, requiring states parties to inform the OPCW of the legislative and administrative measures they have taken to implement the Convention. Of these measures, according to the revised Note, only those of 26 states parties appear to be comprehensive enough for the state party to be able to implement the Convention effectively in its jurisdiction. In only 18 has the requisite penal legislation been extended to nationals extraterritorially, as required by Article VII.1(c). In fact the survey identifies only 17 such states parties: Australia, Belarus, France, Germany, Ireland, Italy, Lithuania, Luxembourg, Malta, the Netherlands, New Zealand, Romania, South Africa, Sweden, Switzerland, the UK and the USA.

17–20 November In Maryland, at Aberdeen Proving Ground, US Army Edgewood Research, Development & Engineering Center hosts the annual *Scientific Conference on Chemical and Biological Defense Research*.

18 November In Iraq, UNSCOM has reopened its offices and is today resuming its on-going monitoring operations. Executive Chairman Richard Butler, asked the day previously on US television about what he thought might have been happening while the monitoring had been halted, had said: "Well, we know that they moved some machines and dual-purpose equipment that could be used for making biological or chemical substances, some machines in the missile area. I'm not accusing them here now in public of doing bad things with that, because we weren't able to see. We weren't there. But we did have a certain awareness, and it's fact, that they moved equipment." Asked what would now happen if Iraq did not hand over the documents UNSCOM had requested and was today once more formally requesting, Ambassador Butler had replied: "Well, I believe that would constitute evidence of lack of cooperation; the promise that was made on Sunday night after nine, ten hours on the weekend in the Security Council, after planes were brought back not many minutes away from their targets [see 14 Nov]. Iraq promised full cooperation. Documents — the production of the documents we need would be the first good instance of giving that cooperation. Failure — I guess I'd have to tell the Security Council what happened and that this didn't seem to me to be cooperation." {*USIS Washington File* 17 Nov} This he repeats in another interview, during which he is also asked when he expects the next stage towards the lifting of sanctions to be reached, namely Security Council initiation of the projected "comprehensive review". He responds: "I do not know, but the process will not need many months. Iraq spoke of a period not exceeding seven days, but this is a very short period. Whereas the United States spoke of a six to eight week period. The process could take that much time or less, but what is certain is that, if Iraq cooperates in all spheres, I will immediately go to the Secretary-General to tell him that I am satisfied. He will just have to inform the Council, and matters will proceed from there." {London *Al-Sharq al-Awsat* 19 Nov in FBIS-NES 19 Nov}

18 November Sudan, by letter to the president of the UN Security Council, renews its request that a mission of investigation be dispatched to investigate the El-Shifa pharmaceutical plant [see 16 Oct] {Reuter from the UN 18 Nov}. A revised draft resolution on the issue is submitted to the Council {*Hansard (Commons)* written answers 30 Nov}.

18 November The UK Defence Ministry, asked in Parliament whether short-term exposure to Agent CR can harm human health in the long term [see 17 Feb], responds: "Biomedical studies conducted at ... Porton Down, and elsewhere, show CR to be a potent sensory irritant with a relatively low toxicity. It has no organ-specific toxicity. CR does not appear to accumulate following short term exposure and it is apparently devoid of long term or chronic toxic effects." {*Hansard (Commons)* written answers 18 Nov}

18–19 November In Washington, the Kurdish Institute convenes a seminar bringing together more than a hundred medical and other experts, Kurdish ones among them, to initiate a project that may bring aid to those in Halabjah who are still suffering from the Iraqi CW attacks a decade ago [see 29 Jul and 29 Sep]. The meeting has been funded by a \$35,000 grant from the US State Department, reportedly a first step in a \$2

million project which, if Congress approves, the US administration will support to study the long-term health effects of chemical warfare in northern Iraq and to gather information for pursuing war crimes charges against President Saddam Hussein. The speakers include Peter Galbraith [see 21 Sep 88], now at the National War College, and Åke Sellström [see 20–27 Mar 98] of the Swedish National Defence Research Institute. They also include Christine Gosden [see 22–23 Apr] of Liverpool University in the UK, who is promoting a collaborative programme of study involving universities in the northern Iraqi towns of Dohuk, Salaheddin and Sulaymaniyah. Professor Gosden later tells reporters: "We are talking about emergency help 10 years after the attack". Another participant is Ehsan Ali Abdulaziz, spokesman for the Islamic Movement in Kurdistan, which effectively controls Halabjah: "I would make one point: we are not ready to turn Halabja into a laboratory without also helping the people. Without committing to long-term humanitarian aid, no-one is going to get security from us." {UPI from Washington 18 Nov, Reuter from Washington 20 Nov, *ASA Newsletter* 18 Dec}

18–20 November In Moscow the Russian Academy of Sciences hosts the 11th Amaldi Conference. Participating from abroad are representatives of the counterpart British, French, Italian and US academies, and also German scientists. The Russian participants include people from the Ministries of Defence and Foreign Affairs. The opening session is devoted to problems of biological weapons and is co-chaired by Rem Petrov, Vice-President of the Russian Academy of Sciences, and Matthew Meselson of the US Academy of Sciences.

19 November In The Hague, the OPCW External Relations Division Media and Public Affairs Branch convenes an informal roundtable discussion for representatives of non-governmental organizations attending the Third Session of the OPCW Conference of the States Parties [see 16–20 Nov]. People from Green Cross, Green Cross Russia, the Hague Appeal for Peace, HSP, Human Rights Watch, the International Federation of University Women, PRIF, SIPRI and VERTIC participate, as well as people from the Special Projects and External Relations divisions of the OPCW Technical Secretariat. The minutes of the meeting, as subsequently distributed by the convenor and excerpted in *OPCW Synthesis* {Jan/Feb}, pay particular attention to the problem of increasing the visibility of the OPCW in the public eye. [Note: In contrast to the period of the OPCW Preparatory Commission, the External Relations Division of the Secretariat no longer has staff allocated expressly to NGO contacts.]

19 November Human Rights Watch releases the results of its two-year investigation of the allegation that Agent BZ, a psychochemical, had been fired against Bosniaks fleeing Srebrenica during the Bosnian War [see 1 May]. HRW says that its report {posted at www.hrw.org/hrw/reports98/bosniacw} does not present conclusive proof substantiating the allegations, but its investigation had nevertheless found much suggestive evidence. HRW therefore calls for "a broader international investigation of the allegations in order to bring justice to the victims, strengthen international controls over the proliferation of chemical weapons, and prevent a dangerous arms race in the former Yugoslavia". HRW presents its report to the International Criminal Tribunal for the former Yugoslavia in The Hague, whose prosecutors are reportedly considering whether to continue the investigation. {Human Rights Watch release 19 Nov, AFP from The Hague 19 Nov, Reuter from Amsterdam 19 Nov, BBC News 19 Nov}

A former chemical officer in the Yugoslav National Army, Mujo Alic, subsequently states on Netherlands television that BZ was used, not only in Srebrenica, but also in Zena [*sic*], another Muslim enclave in Bosnia. {Brussels *De Morgen* 20 Nov in FBIS-EEU 20 Nov}

19 November Panama has included information about abandoned chemical weapons on its territory [see 10 Nov] in its declaration under Article III of the Chemical Weapons Convention [see 7 Oct], so the head of its delegation states during the general debate at the Third Session of the OPCW Conference of the States Parties [see 16-20 Nov]. {*CBWCB Dec*}

19 November In the UK, the Ministry of Defence tells Parliament that it has now completed its review of CS gas holdings [see 17 Feb], and that this “has confirmed a continuing requirement for CS gas as part of a generic, non-lethal weapon capability for operational deployments, and for use in NBC training”. On civil-use CS weapons, the Home Office releases to Parliament the hitherto classified *Guidelines for the Police on the Use of CS for Dealing with Public Disorder*, states that the search for a suitable alternative solvent to the isopropyl acetone currently used in CS Spray weapons is still continuing [see 10 Feb], and reaffirms [see 25 Mar] that CR gas [see 18 Nov] is not issued to police forces in the United Kingdom. The Northern Ireland Office confirms that CR gas is not issued to the Royal Ulster Constabulary but states that the chemical has been authorized to be “held in readiness for use” by the Army in Northern Ireland since October 1973; the Army, however, has not actually used it. {*Hansard (Commons)* written answers 19 Nov}

19–20 November In Washington, the US Presidential Special Oversight Board for the Department of Defense Investigations of Gulf War Chemical and Biological Incidents [see 24 Feb] conducts its first public hearings. They are occasion for veterans service organization, individual veterans and other interested persons to express their views on the Defense Department investigations and to draw attention to specific areas of concern. {AP from Washington 20 Nov}

20 November In Paris, *Al-Watan Al-Arabi* {20 Nov in FBIS-NES 22 Nov} reports on an interview which its chief editor had conducted in Jordan in November 1995 with the late Hussein Kamel, who had fled from Iraq some three months previously [see 8 Aug 95 and 20 Feb 96]. The newspaper records that, after its editor had stated that “reports confirm that you revealed all the secrets and details of the military arsenal Iraq possesses and the places where they are hidden as well as their numbers to the US intelligence and other intelligence services”, General Kamel had said: “If what you say were true my family and I would now be in Washington and not in Amman and we would have new identities and be completely protected. But what stands in the way of my going to Washington is that I refuse to divulge sensitive military secrets. Jordan and King Husayn know this very well.” The chief editor goes on to report: “When I asked him why Saddam Husayn defies the United States and the United Nations and fabricates crises and military confrontations with them which end with his backtracking, Husayn Kamil said: This took place several times and will continue to take place every time Saddam Husayn senses that the inspection teams are getting closer to a sensitive location he does not want them to discover or a secret place for a secret weapon. These weapons are part of the red line that Saddam Husayn will not allow to be crossed.”

20 November OraVax Incorporated officers write in *Science* {282: 1423} about attitudes of industry towards the Biological Weapons Convention and the present negotiation to strengthen it. Their Cambridge, Massachusetts, company produces biopharmaceuticals. The Vice President for Research and Medical Affairs, Thomas Monath, and Chief Executive Officer Lance Gordon conclude: “It is the time for US industry to take the moral high ground and to focus collective wisdom and creativity to bring about a resolution of the issues surrounding on-site activities and the compliance protocol. The fundamental starting place is the recognition of the importance of strengthening the BTWC and the positive results that would ensue, not on hypothetical and unlikely outcomes of a compliance regime. Leaders in the US biopharmaceutical industry need to rally behind the objectives of a strengthened treaty. Only then can the operational details be resolved.”

20 November The US General Accounting Office transmits to the Congress its report on FBI use of federal funds over the past four years for counterterrorism and related activities [see also 12 Nov]. The report estimates that the FBI more than doubled its allocation of resources for combating terrorism, from about \$256 million in FY 1995 to \$581 million in FY 1998. The Congress had directed or provided guidance to the FBI on the use of about a quarter of that funding, which, so the GAO now reports, the FBI had “generally followed”. {GAO/NSIAD-99-7}

20 November At the US National Academy of Sciences there is a workshop on *Assessment of Future Needs for Live Variola Virus* in which US and Russian scientists participate. The US government is preparing for the June 1999 meeting of the World Health Assembly at which a final decision will be taken on the destruction of the two official stocks of smallpox virus remaining in the world [see 2 Feb]. The Departments of Defense, Energy and Health have commissioned the Institute of Medicine to assess the scientific need for the virus. This workshop is to enable information-gathering by the committee which the Institute’s Board on International Health has accordingly established. The committee is told by Dr Peter Jahrling of USAMRIID that the US Army would prefer preservation of the virus. It hears a similar message from a representative of the Russian State Research Center of Virology and Biotechnology. Dr D A Henderson [see 8–11 Mar] argues that the virus is too dangerous and of too little value to be worth preserving. {*Palm Beach Post* 21 Nov}

22 November Iraqi Deputy Prime Minister Tariq Aziz, in an 18-page letter to the president of the UN Security Council, states that Iraq will not be providing the documents which UNSCOM Executive Chairman Richard Butler had requested [see 18 Nov] — in three letters dated 17, 18 and 19 November — because “we have no choice but to doubt the motives of the requests made to us”. An earlier letter to Ambassador Butler from Iraqi Foreign Ministry Under Secretary Riyad al-Qaysi had said that the requested documents either did not exist or were irrelevant. {S/1998/1106} The full Security Council meets two days later and is briefed by Ambassador Butler, but Russia, reportedly alone, blocks its adoption of a statement demanding the documents; the statement instead says that “Council members expressed their continued full support for UNSCOM in fulfilment of its mandate”. {*Washington Post* 25 Nov, Reuter from the UN 25 Nov, London *Financial Times* and *Independent* 26 Nov}

Among the requested documents is an Iraqi air force log-book containing details of the movement of chemical weapons during the Iraq–Iran war, a part of which had been found by an

UNSCOM team earlier in the year but then withheld from it [see 17 Jul] The London *Independent* {20 Nov} quotes General Wafiq al-Sammarai [see 3 Jul], former head of Iraqi military intelligence, as follows: "The logbook contains details of all operations carried out by the air force and is hand-written for the sake of secrecy. It also documents the use and movement of weapons of mass destruction. ... It shows Iraq used VX in the battle of Fao on 17 and 18 April 1988" he also says that it shows Iraq to have used sarin against Halabja in 1988. On another of the documents denied to UNSCOM, a May 1991 memorandum drawn up by Lt-Gen Hazen Abdel Razaq, Maj-Gen Mustafa Kemal and Lt-Gen Mozahem Saeb al-Tikriti, he is quoted as saying: "It gives exact information about what remained of Iraq's weapons of mass destruction after the Gulf War", including about 100 usable Scud missiles and also warheads containing VX.

22 November The London *Sunday Times* reports on the market availability of pathogenic organisms suitable for use in biological weapons. Undercover reporters had posed as middlemen for a medical laboratory in north Africa and approached a sample of 20 of the 450-odd culture collections around the world asking for strains. The newspaper now reports that two organizations had responded positively and apparently without making any checks: an Indonesian institute, which offered mail-order anthrax, plague and Brucellosis bacteria for \$1000, and a Czech institute, which would provide *Clostridium botulinum* for DM 50. The Czech institute strongly rejects the allegation, saying that Czech authorities would have been informed once the order had been confirmed {CTK from Brno 25 Nov}.

22–28 November In Iraq there is a further UNSCOM chemical mission, UNSCOM 257. It is a 5-person team led by Cees Wolterbeek of the Netherlands. It visits 11 sites and, according to a subsequent Iraqi communication to the UN Security Council, uses "FTIR to evaluate the monitoring system of the sites which are subject to chemical monitoring". {S/1998/1173}

23 November Libyan leader Muammar Qadhafi, during an address to a visiting Egyptian delegation, states that, in order to create a balance in the region, the Arabs "have the right to possess arms of mass destruction in the face of the fact that these weapons are now indeed in the hands of the Zionists, both chemical, bacteriological and nuclear weapons". {Libyan TV 23 Nov in BBC-SWB 23 Nov}

23 November In London, UK Foreign Office Minister Derek Fatchett meets with representatives of 15 Iraqi dissident groups. Afterwards he tells reporters that Britain would support an initiative to establish an international war crimes tribunal for Iraqi President Saddam Hussein: evidence sufficient to prosecute, he says, remains from Iraq's invasion of Kuwait and from its use of chemical weapons against Kurdish rebels [see also 18–19 Nov]. {UPI from London 23 Nov}

23 November In England, Dorset County Council calls for the Defence Secretary to appoint an independent expert to investigate the possible health consequences of what has recently been reported in the press, namely the use of fluorescent zinc cadmium sulphide powder [see 14 May 97] disseminated from aircraft in large-area BW defence trials during 1957–63. The *Sunday Telegraph* {1 Nov} had quoted hitherto withheld Defence Ministry information disclosed to Liberal Democrat environment spokesman Matthew Taylor. {*Western Morning News* 2 Nov} Contemporary Ministry reports on the trials have been released into the Public Record Office {*Western Mail* 6 Nov}.

Professor Brian Spratt, the microbiologist and independent expert who is currently investigating other, later, South Coast BW defence trials in which supposedly harmless microbes were used as surrogate BW agents [see 22 May], has declared himself unqualified to extend his investigation to cover the fluorescent-particle trials as well. {Dorset County Council news release 22 Nov}

23–27 November In Switzerland, the government in collaboration with the OPCW Technical Secretariat conducts a training course on CW protection, thereby fulfilling a part of its assistance offer under CWC Article X. Held at the NBC training centre in Spiez, 40 instructors from 31 member states participate in the course. {*OPCW Synthesis* Jan/Feb}

24 November In the UN General Assembly the Sixth Committee concludes its sessional work, approving among other things, a draft Assembly resolution that would empower the Secretary-General to convene the Preparatory Commission for the Establishment of an International Criminal Court for three sessions in 1999, the first during 16–26 February. {UN press release 24 Nov}

24 November In Washington, Senator Lugar describes to reporters his recent nine-day oversight and fact-finding mission to Russia and Ukraine, in which he, Senator Levin, former Senator Nunn and an accompanying team of US Defense Department officials had visited locations of dismantlement operations and proliferation-prevention constructions funded through the Nunn–Lugar Cooperative Threat Reduction Program. One such location was the Obolensk State Research Center of Applied Microbiology [see 7 Nov 97, ca 1 Dec 97 and 3–6 Dec 97] on which Senator Lugar speaks as follows: "Obolensk was the premier biological weapons research and development institute for the bacterial pathogens plague, tularemia and glanders, as well as the world's leading anthrax research institute. Today, through the Nunn–Lugar program, the scientists at Obolensk are cooperating in vaccine research with the United States Army Medical Research Institute for Infectious Disease and the Los Alamos National Laboratory. We were given complete access to the facility. We examined the laboratories on eight floors of the building, various culture facilities, and observed the Nunn–Lugar pilot projects [see 7 Nov 97]. ... The director of Obolensk pointed out that without support from Moscow or collaborative efforts with the West, he is convinced that institute security will fall to dangerous levels. We discussed Nunn–Lugar plans to develop a system to safeguard and enhance security and access denial for biological weapons materials at Obolensk and to an equally dangerous situation at an institute in eastern Siberia which we call Vector [see 7 Nov 97 and 3–6 Dec 97]. The need for Nunn–Lugar to move into the biological field is clear. We must attempt to prevent proliferation and reduce the loss of trained biological scientists to rogue nations. But we must also increase transparency in these facilities to enhance American military protection and US counter-terrorism capabilities. Our meeting [at ISTC Moscow] with the 13 [biological] institute directors [from across Russia] and our visit to Obolensk were dramatic steps forward in this critical area." {FNS transcript 24 Nov, *DTRA Connection* Jan}

25 November Netherlands Foreign Minister Jozias van Aartsen, responding to a parliamentary question on the possibility of a Dutch offer to host the projected Organization for the Prohibition of Biological Weapons, states that an interdepartmental working group is currently overseeing the preparations necessary for a good and detailed bid. He notes that Switzer-

land has already put Geneva forward as a candidate. {DVB/NN-503/98} According to subsequent press reporting, the underlying concept is to house the "OPBW" next to the Netherlands Congress Centre and close to the headquarters-building of the OPCW, the original planning for which had taken the possibility of common OPBW/OPCW activities into consideration. The basic problem for The Hague would be how to raise the estimated \$3 million or so that would be needed to set the enterprise going. {*Haagsche Courant* 15 Jan} OPCW press officer Donato Kiniger-Passigili is reported as saying: "The new OPCW offices are already overcrowded. There is no way they can share our space." {*Haagsche Courant* 16 Jan}

26 November China and Japan issue a joint press communiqué in Tokyo during the state visit of President Jiang Zemin to Japan. In it, "Japan reiterated that it will treat sincerely with the chemical weapons it has left in China, take up responsibilities and take concrete measures as soon as possible to destroy these abandoned chemical weapons" [see also 14–31 Oct]. {Xinhua from Tokyo 26 Nov}

26 November The UK Ministry of Defence announces its intention of increasing procurement of land-based biological detection equipment. Parliament is later told that some £65 million of additional equipment is involved: "A number of Prototype Biological Detection Systems [PBDS] are being rapidly procured, some of which have already come into service. The planned procurement of Integrated Biological Detection Systems [IBDS] has been increased and we are also planning to develop and procure new Remote Biological Detection Systems." {*Hansard (Commons)* written answers 7 Dec} The PBDS builds upon the Biological Detection System which CBDE Porton Down had fielded in the Persian Gulf area during the 1990–91 war over Kuwait. It is a 4-tonne vehicle-mounted system, for the procurement of which Hunting Engineering is the prime contractor with Graseby and EDS Defence as partners. The IBDS is described as a more advanced system. {*Jane's Defence Weekly* 13 Jan, *Defense News* 25 Jan} Four of seven thus-far-delivered PBDS vehicles are deployed to Kuwait, so it is reported two months later {*JDW* 27 Jan}.

27 November UNSCOM Executive Chairman Richard Butler, in a letter to Iraqi Deputy Prime Minister Tariq Aziz, states that, as he had told the Security Council during informal consultations on 24 November, he expected "to be in a position to formulate a report in two or three weeks time on whether or not Iraq has returned to full cooperation". This would be the report to the UN Secretary-General prepared "in accordance with the statement to the press by the President of the Security Council on 15 November" [see 14 Nov]. {S/1998/1127}

28 November In Geneva, the Pugwash Study Group on Implementation of the CBW Conventions holds its tenth workshop [see 15–17 May], on *The BWC Protocol Negotiation: Unresolved Issues*. Participating are 33 people from 13 countries (Brazil, China, Germany, India, Iran, Israel, Italy, Japan, Nigeria, Russia, Switzerland, the UK and the USA).

29 November In India, military manoeuvres involving some 60,000 troops, 300 tanks and 160 aircraft have just begun close to the Pakistani border. They include nuclear and CW exercises. {*Vancouver Sun* 3 Dec}

29 November US Senator Arlen Specter, speaking on the Fox News talk show, says that the Congress should hold "closed-door hearings" to examine the evidence which led to

the US missile attack on the pharmaceutical plant in Sudan [see 18 Nov]. He says: "I do not believe that the evidence is overwhelming. We ought to be finding the facts." {AFP from Washington 29 Nov}

30 November In Moscow, the head of the Russian Defence Ministry RKhB Protection Troops, Colonel General Stanislav Petrov, says in interview that Russia plans to meet its international obligations regarding the destruction of its chemical weapons even though financial difficulties have not yet made it possible to construct the requisite number of chemdemil facilities [see 10 Nov]. He says that in 1996 the Ministry of Defence had received only 13 percent of the funds budgeted for the chemdemil programme, only 2.2 percent in 1997, and, during the first ten months of 1998, only 2.1 percent. Extra-budgetary sources of funding, including free foreign assistance, continue to be sought: "An agreement has been signed with Germany, we are in the preparation stage with the Netherlands, talks are under way with Italy, Finland and Sweden. France, Great Britain and Norway have said they intend to offer help. A conference to develop existing agreements is planned for the start of 1999 in Moscow, discussing proposals for specific directions of cooperation and the amount of funds to be allocated." A problem thus far with the foreign assistance has been the imposition upon it of levies, taxes and customs duties, but a bill currently before the Russian Federal Assembly would exempt the assistance from such imposts. {ITAR-TASS 30 Nov in BBC-SWB 3 Dec}

30 November The UK Defence Ministry temporarily suspends its programme of anthrax immunization of service personnel [see 22 Jun] following delays during the manufacture of new stocks of the vaccine. {*Jane's Defence Weekly* 11 Nov}

30 November–4 December Iran conducts naval manoeuvres in the central Persian Gulf and out into the Sea of Oman involving 160 warships and 120 aircraft which amphibious landing and chemical warfare exercises. {BBC World News 1 Dec}

December Iraqi authorities had arrested Dr Nassir al-Hindawi, described earlier in the year by the *New York Times* as "the father of Baghdad's germ weapons program", several months prior to his failed flight from the country [see 24 Mar], so *The Middle East* {Dec} now reports, having, it says, "sat on the story for several months" at the request of unidentified persons concerned about its sensitivity. The story as now related is that Dr al-Hindawi had been passing information to western contacts, the content and quality of which had precipitated one of the recurrent plummets in UNSCOM/Baghdad relations, and that after his arrest he had been 'turned' under threat of death, thereafter providing "very little of value to those monitoring Iraq's biological warfare program". This had gone on for "some months". The story is attributed to an unidentified source in Washington.

1 December Iraq, in further letters [see 22 Nov] to the UN Security Council released as UNSCOM Executive Chairman Richard Butler leaves New York for talks in Paris and Moscow, has now provided further responses to UNSCOM questions {*International Herald Tribune* 3 Dec}. However, UN officials state that Iraq has not yet handed over a key document which Ambassador Butler had, in a letter four days previously to Iraqi Deputy Prime Minister Tariq Aziz, asked for by 30 November {S/1998/1127, AFP from the UN 30 Nov}. The document is the

one found by, and then seized from, UNSCOM inspectors in July [see 22 Nov].

In the UK, Parliament is told by Foreign Secretary Robin Cook that, if Saddam Hussein “breaks his undertaking to allow UNSCOM to resume inspections, we are prepared to take military action without further negotiation” [see also 14 Nov] (*Hansard Commons*) oral answers 1 Dec}.

1 December In Brussels, the Chairman of the NATO Military Committee, General Klaus Naumann, speaks at the Higher Royal Institute for Defence of four kinds of danger to which the alliance could be exposed at the beginning of the next century. He is subsequently reported as having said: “I fear above all international terrorist organizations which possess the poor man’s weapons of mass destruction — bacteriological or chemical weapons. A small quantity of anthrax in the air-conditioning system of Brussels car parks would be enough to eliminate the whole of Brussels in about 10 days”. This, again reportedly, is why he wants NATO to retain its option of being the first to use nuclear weapons. (*De Standaard* 2 Dec in FBIS-WEU 2 Dec)

1 December UK Secretary of State for Trade and Industry Peter Mandelson releases the 54 responses received by the end of the consultation period on the government’s *Strategic Export Controls* white paper [see 1 Jul], which among other things proposes legislation that would create new governmental powers to control exports of intangible technology applicable to weapons destruction — as, for example, through the teaching of overseas students. The comments are to be reviewed, and there will be a “further announcement on the next steps” in due course. {DTI press release 1 Dec}

1 December The US Institute of Medicine publishes *Chemical and Biological Terrorism: Research and Development to Improve Civilian Medical Response*, which is the final version of the report of its Committee on R&D Needs for Improving Civilian Medical Response to Chemical and Biological Terrorism Incidents [see ca 9 Jan]. Committee chair Peter Rosen of the University of California at San Diego School of Medicine says: “Although preparing for and responding to terrorism is a daunting challenge, it is not an insurmountable one. By bolstering existing medical resources, improving communications, and developing better ways to monitor and detect threats, we can minimize the damage that a terrorist attack in the United States could cause.” The report identifies more than 60 research and development projects as potentially useful in this regard. It advocates the placing of high priority on preparing for certain types of attack, including operations-research to advise federal authorities on how and where to stockpile antidotes against nerve gas, and a national effort to develop, manufacture and stockpile improved vaccines against anthrax and smallpox. {US National Academy of Sciences press release 1 Dec}

1 December In Cartagena, Colombia, during an address to the Defense Ministerial of the Americas, US Defense Secretary William Cohen says that “catastrophic” terrorism is likely to increase. He continues: “Even though the reporting would indicate that acts of terrorism are actually decreasing, the level of lethality is on the rise. And that is especially true when it comes to dealing with chemical and biological weapons. That is the threat that all of us are likely to face in the future. And whether we’re talking about a drop of VX, one drop of which can kill you in a matter of a couple of minutes, or anthrax, which a single spore inhaled in your lungs will kill you in a matter of a few days, or whether we’re talking about sarin gas released in a Tokyo subway or New York City or anywhere in the Americas. Those

are the dangers that we face today and tomorrow.” He commends the creation by the Organization of American States of the Inter-American Commission on Terrorism. {DefenseLink transcript 1 Dec}

1–2 December In London, Jane’s Information Group hosts its second conference on *Non-Lethal Weapons*, which is intended to bring together senior military and law enforcement personnel to discuss and debate the latest developments in non-lethal weapons. The conference is chaired by Professor Malcolm Dando of the University of Bradford. The registration fee is \$1155 per delegate, and Jane’s have since published the proceedings at a price of £250 per copy.

1–4 December In Singapore, the Defence Science Organization convenes the first *Singapore International Symposium on Protection Against Toxic Chemicals*. Some 150 people from 25 countries participate. A pre-symposium meeting to discuss the designation of laboratories for CWC verification tasks is co-hosted by the OPCW Technical Secretariat in the person of Deputy Director-General John Gee. SISPAT-1 itself includes presentations by CW defence specialists from France, the Netherlands, Singapore, Sweden, Switzerland, the UK and the USA. {*ASA Newsletter* 19 Oct, 18 Dec and 19 Feb}

1–6 December In Iraq there is a further UNSCOM biological mission, UNSCOM 253, led by David Kelly of the UK. According to a subsequent Iraqi communication to the UN Security Council, the 13-person team “conducted lengthy interviews and discussions on R&D in the past biological programme”. {Xinhua from Baghdad 2 Dec, S/1998/1173}

2 December In South Korea, Representative Pak Seh-chik files suit in Seoul against the US government on behalf of veterans who claim they are suffering after-effects of their exposure to Agent Orange during the Vietnam War [see also 2 Jun]. Of the 320,000 South Koreans who participated in the war, more than 30,000 are said to be suffering such after-effects. The legislator had filed a similar suit in a New York federal court in June 1994, but the case had been dismissed under the double-jeopardy principle whereby a defendant cannot be put on trial in a case that has already been tried. He had filed the suit again in July 1997, producing new evidence said to show that the US military had employed the chemical herbicide despite prior knowledge of its harmful effect on human beings. {Yonhap from Seoul 2 Dec in BBC-SWB 2 Dec}

2 December In Beijing a spokesman for the Ministry of Foreign Trade and Economic Affairs announces that the Chinese State Council has approved a long-awaited list of technology export controls. The list, which will not be published, is said to specify 48 categories of technology exports and 183 items controlled by the Ministry. {Reuter from Beijing 2 Dec}

2 December The UK Ministry of Defence informs Parliament that, in the current financial year, the total expenditure on chemical and biological defence research is estimated at £33.6 million. (*Hansard (Commons)* written answers 2 Dec)

2 December Bahrain is sponsoring a draft UN Security Council resolution on behalf of the 22-nation Arab Group that renews the call for an investigation into the Al-Shifa factory in Khartoum [see 29 Nov], Sudan, which, in August, had been destroyed with cruise-missiles by the United States. {AP from the UN 2 Dec}

2 December Canadian Armed Forces announce that a soldier, Sgt Mike Kipling, who had refused the mandatory immunization against anthrax [see 3 Mar] will face a court martial, in Winnipeg, on a date yet to be announced. Sgt Kipling had reportedly disobeyed his immunization order because of concern that the vaccine could be a cause of "Gulf War Syndrome". {CBC web posting 2 Dec, *Ottawa Citizen* 5 Feb}

2-3 December In Baghdad the Iraqi Ministry of Health convenes an international symposium on the health effects of depleted uranium [see 14 Oct]. The event is opened by Deputy Prime Minister Tariq Aziz. There are some 300 participants, most of them Iraqi but also including people from Canada, Germany, Jordan, Tunisia, the UK and the USA. A final declaration is adopted which calls for "coordination with international organizations to have depleted uranium banned" and which also urges preparations for a lawsuit to be filed against the UK and the USA seeking compensation for damages from the substance [see also 27 May]. {INA from Baghdad 2 Dec in BBC-SWB 2 Dec, Reuter from Baghdad 3 Dec}

3 December The Japanese government notifies the OPCW that the Aum Shinrikyo production facility for sarin nerve gas at Kamikuishiki [see 14 Sep] has now been destroyed {OPCW release 9 Dec}. A team of OPCW inspectors visits the site a week later and verifies the destruction {Kyodo from Kofu 10 Dec 98 in FBIS-TAC 10 Dec, *OPCW Synthesis* Jan/Feb}.

3 December Iraqi Deputy Prime Minister Tariq Aziz writes to UN Secretary-General Kofi Annan to say that links developed between UNSCOM and American, British and Israeli intelligence threatened the national security of Iraq and undermined the credibility of the United Nations. He cites press reports stating that the cancelled US air strikes [see 14 Nov] would have targeted military sites selected with the help of information compiled from seven years of UNSCOM inspections in Iraq. {Reuter from Baghdad 4 Dec}

3 December On German television it is stated that the chemical firm Degussa AG, not IG Farben, had been primarily responsible for supplying the Zyklon B used in the mass-murder of Jews and other inmates of Nazi death-camps. The report, by ARD, is based on files recently opened in Poland. It says that Degesch GmbH, controlled by the sales division of Degussa, made a profit of \$176 million in today's prices from the delivery of 20 tons of Zyklon B to the camp at Auschwitz during 1942-43. Degussa has now opened its archives to researchers. {AP from Frankfurt 3 Dec}

3-10 December In Iraq there is a further UNSCOM biological mission, UNSCOM 261, led by Diane Seaman of the United States. The 13-person team visits 8 sites subject to monitoring, according to a subsequent Iraqi communication to the UN Security Council. {S/1998/1173, *New York Times* 17 Dec}

4 December In Kiev the head of the Ukrainian Security Service, the director of the Romanian Foreign Intelligence Service and the Moldovan Minister of National Security meet to sign an agreement on, among other matters, cooperation on preventing and combatting terrorism and on monitoring nonproliferation of nuclear and CBW weapons. {UNIAN 4 Dec in BBC-SWB 6 Dec}

6-10 December In Iraq there is a further UNSCOM biological mission, UNSCOM 260, led by Gabriele Kraatz-Wadsack of Germany. According to a subsequent Iraqi communication to

the UN Security Council, the 7-person team "conducted interviews and discussions on the growth media imported for the past biological programme". {S/1998/1173}

8 December Iranian officials have been visiting countries of the former USSR and have approached "dozens" of scientists who once worked in the Soviet BW programme with offers of employment in Tehran, some of which have been accepted [see also 10 Feb Iran and 27 Aug 95], so the *New York Times* {8 Dec} reports, quoting at length from interviews with scientists in Russia and Kazakhstan. Also quoted is a member of the Iranian mission to the United Nations, Counsellor Gholamhossain Dehghani, saying that foreign scientists were indeed working in his country but categorically rejecting the claim that Iran was hiring foreigners to work on biological weapons, adding: "We do not believe that having such weapons increases our security". US State Department spokesman James Foley declines to comment directly on the story but tells reporters that "the dual-use nature of biotechnology makes it very difficult to distinguish legitimate research from weapons research" and that Iran is "a country which the United States believes is developing biological weapons capability". He also says: "Russia's economic problems have negatively affected its weapons scientific community, and we are concerned about the possibility that scientists and engineers will be hired by Iran or other countries of proliferation concern. As you know, the US Government has provided over \$30 million in assistance to former Soviet biotechnology institutes from Fiscal Year '92 through '98, through a number of programs designed to counter the proliferation of weapons of mass destruction and delivery system expertise from the former Soviet Union, and to secure weapons material. Nearly \$2 million more has been allocated for these activities in Fiscal Year '99 [see 18 Oct and 2 Mar]." {USIS *Washington File* 8 Dec} Further official Iranian denials are issued {ITAR-TASS from Tehran 10 Dec, IRNA from Moscow 10 Dec}, and also Russian ones {FNS transcript of Foreign Ministry press briefing in Moscow 11 Dec}.

8 December In Moscow the International Science and Technology Center, which is supported by the European Union, Japan and the United States to redeploy former Soviet weapons scientists into peaceful work [see 24 Nov Washington and 22 Nov 96 US], is now funding about 17,800 such scientists, of whom 1055 are biologists. Deputy Director Randall Beatty is quoted in the *New York Times* {8 Dec} as saying that that proportion, which will account for about 15 percent of ISTC payments this year, has been growing sharply and "will inevitably grow further". The newspaper also reports that nearly a hundred Russian scientists who were once engaged in the Soviet BW programme have visited US institutes and laboratories these past ten months, and that more than a hundred US scientists have visited previously closed Russian biological institutes, many of them on several occasions.

8 December The US Army's Chemical Disposal Program for eliminating the country's chemical weapons is criticized in a recently released high-level study, *Overarching Issues Assessment*, which had been commissioned a year previously by the Deputy Assistant Secretary of the Army for Chemical Demilitarization, Dr Theodore Procviv [see 11 Mar 97]. Chaired by Dr Amoretta Hoeber [see 1 Dec 97], the study has reportedly concluded that drastic changes are necessary if the chemdemil programme is to meet its deadlines and not lose support in Washington; the CDP has systemic problems in public outreach, legislative relations and overall programme management. {*Anniston Star* 8 Dec} The panellists responsible for the

study are quoted as writing: "Even inside DoD and the Army the program lacks credibility; no one appears to want to take charge because it is seen as a disaster with no solution." {CWWG release 10 Dec}

8–9 December In Brussels, the North Atlantic Council meets in ministerial session to set the agenda for the impending 50th anniversary NATO Summit [see 25 Sep US]. US Secretary of State Madeleine Albright further advances the US campaign for NATO to take on a more global role, particularly in combatting terrorism and the proliferation of weapons of mass destruction, in which the first step would be increased sharing of intelligence through a new NATO Center for WMD. {London *Daily Telegraph* 9 Dec} German Foreign Minister Joschka Fischer reaffirms his call for NATO to consider moving to a no-first-use nuclear-weapons policy [see 17 Oct, see also 1 Dec].

In a communiqué issued by Council on 8 December, the ministers note the report of the Joint Committee on Proliferation regarding the activities of the Senior Political-Military Group on Proliferation and the Senior Defence Group on Proliferation, continuing: "The Alliance and its members remain committed to preventing proliferation and to reversing it, should it occur, through diplomatic means. At the same time, we recognise that proliferation can pose a direct threat to the Alliance. Building on the successful work of the NATO groups on proliferation, we are prepared to expand NATO's effort to address the evolving proliferation threat. We therefore task the Council in Permanent Session to prepare for the Washington Summit proposals for an initiative to ensure that the Alliance has the political and military capabilities to address appropriately and effectively the challenges of the proliferation of NBC weapons and their means of delivery." {NATO press release 8 Dec}

8–11 December In The Hague, the OPCW Executive Council [see 6–9 Oct] convenes for its thirteenth regular session. {CBWCB Dec}

9 December In China, the Heilongjiang People's Publishing House has now published *History of Japan's Chemical War*, a 400-page study which includes information on abandoned chemical weapons [see 26 Nov]. It states that Japan had commenced research into chemical weapons in 1915 and that, during 1937–45, invading Japanese troops had used chemical weapons in 16 major battles in China. {Xinhua from Beijing 9 Dec}

9 December In the Kosovo province of Serbia, aid workers from Oxfam, the International Committee of the Red Cross and other organizations have reported what appears to have been a deliberate poisoning of wells by government troops in at least 58 villages. {*Washington Post* 9 Dec}

9 December In Angola, where civil war has recommenced, UNITA is once again [see 19 Jul 94] accusing government forces of using chemical weapons. {RTP 9 Dec in FBIS-APR 9 Dec}

9–11 December In Moscow, there is a NATO Advanced Research Workshop on *Scientific and Technical Basis for Strengthening the BTWC through a Legally Binding Protocol* convened under the co-direction of Dr Alexander Nikitin, director of the Center for Political and International Studies, and Professor Graham Pearson of the United Kingdom. There are 16 participants from NATO countries (Canada, France, Germany, Italy, the Netherlands, Norway, the UK and the USA), 25 from Partnership for Peace countries (Czech Republic, Poland, Ro-

mania, Russia, Slovakia and Ukraine), 2 from other countries (Brazil and South Africa), and 1 from NATO, plus 10 Russian observers.

10 December In Iraq a further UNSCOM biological mission, UNSCOM 256, led by David Kelly of the UK begins its work, with completion scheduled for 18 December. According to a subsequent Iraqi communication to the UN Security Council on 14 December, the task of the 7-person team is "focused on the growth media (yeast essence) imported by Samara Drugs Factory [for use] in the manufacturing of medicine". {S/1998/1173}

10 December In Harare, Zimbabwean Health Minister Timothy Stamps is quoted in the *Financial Gazette* {10 Dec in FBIS-APR 11 Dec} thus: "It is true that we are researching into the activities of Rhodesian security agents during the liberation struggle and that they may have used bacteriological warfare [see also 14 Nov 91]. ... With help from the British, we want to find out whether the anthrax organisms which are being isolated now from the outbreaks that have occurred match with the anthrax bacteria they were producing during the Second World War. ... I am sure it was a laboratory-devised virulent type [of anthrax] ... and one suspects that it was specifically developed as a weapon against an overwhelming number of people who were regarded as enemies to those who occupied power at the time. ... It is highly likely that this may have happened because the pattern of anthrax outbreaks in this country is not consistent with normal and natural outbreaks of the disease. In this country, we have had cases where 10 or 12 cases of anthrax have been reported in an area and then suddenly in that same area and in the same period you get the cases shooting up to 1,800 or more." Dr Stamps says that the research is being done by scientists at Blair Research Institute with assistance from the BioMedical Research Institute of Southern Africa. Also under investigation are reports that cholera was now present in Mashonaland East because the Mazoe River had been seeded with cholera organisms during the civil war. The inquiry is responsive to statements by Col (ret) Dr Richard Ngwenya and Prof Mazuru Gundidza before a government-appointed health review commission that a major cause of current health problems in Zimbabwe is past Rhodesian CBW. On this charge, the *Gazette* quotes the last Rhodesian Prime Minister, Ian Smith, saying: "It's a lot of rubbish. I know nothing about [such germ warfare]. They [the Rhodesian security forces] could have done so without my knowledge. ... Those saying that are giving us credit for being more creative and brilliant than what we were." And the *Gazette* quotes former Rhodesian army officer Colonel Lionel Dyck: "Poison was used on clothes but other germs of warfare no. In fact both sides used poison. The war was not fought honourably and techniques used by both sides were not honourable. Cholera was also used mostly in Mozambique [which served the ZANLA forces of Mugabe's ZANU party as a rear supply base]."

11 December In Washington, the FBI-coordinated National Domestic Preparedness Office, which is intended to serve federal, state and local agencies as a clearinghouse for information on training programmes for responding to domestic incidents involving weapons of mass destruction [see 2 Oct], and as a hub for the development of other national assistance initiatives, has now been established and publishes the first issue of its monthly newsletter, *The Beacon* {posted on the internet at www.ndpo.com/vol_1no.htm}.

13 December In Utah, at the Tooele Chemical Agent Disposal Facility, more than half a ton of sarin nerve gas spills from

a storage tank feeding the incinerator, apparently because of a mishap during routine maintenance. The spill is entirely contained within the sealed toxic cubicle where the tank is located, and the safety systems work as intended. TOCDF officials later state that no one had been endangered. Chemdemil operations resume four days later. {*Deseret News* 15 Dec, *Tooele Transcript* 17 Dec}

14 December Iraq transmits to the UN Security Council, through the Secretary-General, a report on UNSCOM activities in Iraq since 18 November. {S/1998/1173}

14 December In Washington, a US/UK Joint Venture Oversight Group on the defence response to the threat posed by CBW weapons convenes for its first meeting. This is in furtherance of an agreement between the defence secretaries of the two countries that they should, in the words of George Robertson to the UK Parliament, “establish a formal programme of co-operation on the threat posed to our forces, especially by chemical and biological weapons” {*Hansard (Commons)* 19 Oct}. The Group agrees, according to a subsequent UK Defence Ministry statement, “the basis on which work would be carried forward in the areas of policy, operational assessment and technical co-operation”. The statement goes on to affirm the continuing value of existing trilateral (Canada/UK/US) and quadripartite (Australia/Canada/UK/US) collaborations on CBW defence. {*Hansard (Commons)* written answers 26 Jan}

15 December UNSCOM Executive Chairman Richard Butler transmits to the UN Secretary-General the report required of him [see 27 Nov] on whether Iraq has returned to full cooperation. The 10-page letter report, which succeeds two weekly progress reports to the Security Council reportedly critical of Iraq {*Reuter* from Baghdad 6 Dec, *Washington Post* 7 Dec, UPI from the UN 10 Dec}, concludes that “Iraq did not provide the full cooperation it promised on 14 November 1998” and that it had “initiated new forms of restrictions upon the Commission’s work”. The Secretary-General transmits the report to the Security Council, together with one in which the IAEA stated that it had received cooperation. {S/1998/1172} According to newspaper reports, Ambassador Butler then orders the hundred-odd UNSCOM staff out of Baghdad into Bahrain {*International Herald Tribune* 19–20 Dec}.

16 December Iraq is attacked by British and US air-to-ground weapons in a sustained bombardment, Operation *Desert Fox*, which, by the time it ends late on 19 December, will have involved 218 sorties by tactical strike aircraft dropping some 600 bombs, more than 432 sorties by support aircraft, and the launch of more than 425 cruise missiles {*Aviation Week & Space Technology* 21/28 Dec, *Jane’s Defence Weekly* 13 Jan}. The UN Security Council is informed only after the attack has begun, while the Council is actually in the process of considering the report of the Secretary-General on Iraqi cooperation [see 15 Dec]. The following explanation is given to the Council by UK Permanent Representative Jeremy Greenstock: “The [UNSCOM report] states clearly that Iraq did not provide the full cooperation it promised, and that UNSCOM is unable as a result to conduct the substantive work mandated to it by the Security Council. The United Kingdom and the United States have acted on the basis of the relevant resolutions of the Security Council. Our objective is compliance by the Iraqi leadership with the obligations laid down by the Council. The operation was undertaken when it became apparent that there was no prospect of this being achieved by peaceful means. It will have the effect of degrading capabilities which have been the subject

of Security Council resolutions over the past nine years. Targets have been carefully chosen to avoid civilian casualties.” {S/1998/1182}

Within the Security Council the UK and the USA are largely isolated, the three other permanent members — China, France and Russia — and most of the non-permanent members being strongly opposed to the offensive. UN Secretary-General Kofi Annan issues a statement to the press in which he says: “This is a sad day for the United Nations, and for the world. My thoughts tonight are with the people of Iraq, with the 370 United Nations humanitarian workers who remain in the country, and with all others whose lives are in danger. It is also a very sad day for me personally. Throughout this year I have done everything in my power to ensure peaceful compliance with Security Council resolutions, and to avert the use of force. This has not been an easy or a painless process.” {UN press releases 16 Dec}

President Clinton, who has before him the impending vote by the US House of Representatives on his impeachment, announces that the mission of the US forces “is to attack Iraq’s nuclear, chemical, and biological programmes, and its military capacity to threaten its neighbors”, the purpose being “to protect the national interest of the United States and, indeed, the interest of people throughout the Middle East and around the world”. UK Prime Minister Blair declares that, if Saddam Hussein “will not, through reason and diplomacy, abandon his weapons of mass destruction programme, it must be degraded and diminished by military force”. {*USIS Washington File* 16 Dec}

17 December OPCW Director-General José Bustani says in interview that his organization is ready to step in to take over from UNSCOM at any time, provided both Iraq and the UN Security Council agreed, reportedly adding: “That would be a most welcome development and it would indicate that Iraq is taking the commitment not to develop chemical weapons seriously” {*Reuter* from Amsterdam 17 Dec}. His press officer, Donato Kiniger-Passigli, later tells journalists: “The director-general has made it clear we have the expertise and could take charge of the chemical weapons part ... but Iraq has not ratified the treaty. We cannot enter by ourselves. We have a mandate only if the nation concerned allows us to step in. ... The Executive Council would have to examine the case [if the UN asked the OPCW to step in]. ... We can speculate on a number of possibilities, but our Convention says that you have to be a member. ... The most logical way is for Iraq to sign up to the Convention. ... At this moment we have no indication that Iraq plans to do so.” {*Reuter* from The Hague 23 Dec}

17 December In the UK, the Ministry of Defence responds to a question in Parliament about the use of agent CR by the armed forces [see also 19 Nov] since 1968: “We have no records of CR having been used operationally by the Armed Forces. ... CR was authorised to be held in readiness for use in Northern Ireland in October 1973. Its possible use has also been authorised on a small number of occasions where the armed forces have responded to a request for assistance for law enforcement purposes from the civil power. CR is only authorised as a non-lethal self-defence option where the risk to the safety of military personnel is considered particularly high.” {*Hansard (Commons)* written answers 17 Dec} Six weeks later the Ministry says there have been two instances of such authorization in the past two years, but it declines to disclose the circumstances. {*Hansard (Commons)* written answers 28 Jan}

18 December The Chinese official news agency Xinhua reports that the dismembered remains of 29 victims of Japanese BW experimentation during World War II had been unearthed in Jiangsu province this past August. The report states that Chinese military pathologists had confirmed this cause of death and had detected traces of cholera. {AFP from Beijing 18 Dec}

19 December In Nicosia it is reported that Cyprus is to join the Australia Group. A ministerial committee has been established by the Cabinet to develop legislation and regulations to control the movement of suspect substances through Cyprus [see also 29 Aug 96]. {Xinhua from Nicosia 19 Dec}

21 December The Japanese Finance Ministry approves a Yen 200 million item in its draft budget for Fiscal Year 1999 for the equipment of Special Teams to Combat NBC Terrorist Activities. The National Police Agency is to establish the teams at the Tokyo Metropolitan Police Office and the Osaka Police Office. {Tokyo *Nihon Keizai Shimbun* 22 Dec in FBIS-EAS 25 Dec}

21 December Iraqi Deputy Prime Minister Tariq Aziz, speaking at a news conference in Baghdad during the immediate aftermath of the British and US attacks on his country [see 16 Dec], rejects any future role for UNSCOM, saying: "The moment America and Britain launched missiles against Iraq they killed UNSCOM". He states that UNSCOM Executive Chairman Richard Butler was "a cheap pawn in the hands of the Americans". {Al-Jazeera TV 21 Dec in BBC-SWB 21 Dec} President Chirac of France had the day previously called for a "fundamental review" of the entire UN policy towards Iraq, including replacement of the UNSCOM regime. {*International Herald Tribune* 21 Dec}

Ambassador Butler has by now become the subject of public ad hominem attack by some governments. In the UN Security Council on 16 December, the Permanent Representative of China, Ambassador Qin Huasun, had said: "The leader of UNSCOM played a dishonourable role in this crisis. ... The reports submitted by UNSCOM to the Secretary-General were unfounded [*sic*] and evasive of the facts. It is difficult for the UNSCOM leader to shed his responsibility over the current crisis." On that same occasion the Permanent Representative of Russia, Ambassador Sergey Lavrov, had said that Ambassador Butler had presented a distorted picture of what was taking place in Iraq and "grossly abused his authority". {UN press release SC/6611 of 16 Dec} Ambassador Butler had defended himself at a press conference the next day, stating that he had drawn up his report after consulting with "the chief inspectors who did our work in the field in this period of testing Iraq's promise", and that the report, for which he accepted responsibility, was "factual, clear, objective and honest". He had continued: "I have heard that there have been suggestions ... that the timing of this report and the purpose of this report was in some way structured to suit United States purposes. That is utterly wrong. I told the Security Council on 24th November that it would take two or three weeks for us to test Iraq's cooperation. I went to Paris, I went to Moscow, I talked with other ambassadors here. Everyone who asked me, I said, 'You will have this report on the 14th or 15th of December'. ... I want to say it as simply and as plainly as I can. That report was based on the experts of UNSCOM. It danced to no one's tune. It was not written for anyone's purposes... It was my report as promised, on time, based on the facts." {FNS transcript 17 Dec}

22 December In Afghanistan, Osama bin Laden [see 4 Nov] gives interviews to journalists suddenly summoned to meet him

that are later published in the US magazines *Time* {11 Jan} and *Newsweek* {11 Jan}. Responding in the *Time* interview to a question about whether he had tried to obtain chemical or even nuclear weapons, he responds: "Acquiring weapons for the defence of Muslims is a religious duty. If I have indeed acquired these weapons, then I thank God for enabling me to do so. ... It would be a sin for Muslims not to try to possess the weapons that would prevent the infidels from inflicting harm on Muslims." {London *Independent* 4 Jan}

Shortly afterwards a delegation from Iraq visits bin Laden, so it is later reported with attribution to unidentified US intelligence officials, who, however, offer only speculation on the purpose of the visit {London *Guardian* 6 Feb}. Some two months later, at a press conference in Kandahar, Taliban supreme leader Mullah Omar states that "Osama has disappeared and we do not know where he has gone" {London *Guardian* 15 Feb, Beijing *Renmin Ribao* 18 Feb in FBIS-EAS 21 Feb}.

22 December The Russian Emergencies Ministry has just concluded an investigation of the seabed in the northeastern part of the Black sea, between Tuapse and Novorossiysk. There, scientists on board the research vessel *Spasatel Prokopchik* have discovered sharply increased levels of radionuclides Sr-90 and Cs-147 but, neither there nor in other parts of the Russian sector of the Black Sea basin, were they able to find the sea-burial sites for chemical weapons whose existence had been suggested by mustard-gas containers caught in fishermen's nets in recent years, and perhaps also by the increasingly frequent sightings of dead dolphins [see also 9 Jun 97 and 28 Oct 97]. The ministry is now seeking declassification of all the Defence Ministry's sea-burial charts, and is also advocating the compilation of a special register of underwater chemical burial sites. {Moscow *Izvestiya* 22 Dec in BBC-SWB 8 Jan}

22 December In The Hague, Netherlands Foreign Minister Jozias van Aartsen and Russian Ambassador Alexander Khodakov sign the framework agreement under which the Netherlands will be rendering some \$12.5 million technical assistance, in four projects, for the Russian chemdemil operations in Kambarka [see 30 Nov, 19–22 Mar 97, 20 May 96 and 3 Nov 95]. {ITAR-TASS from The Hague 22 Dec}

22 December The EU presidency, currently Austria, issues a declaration on the BWC Protocol negotiation on behalf of the European Union and EU-associated countries that includes the following: "[T]he European Union believes that it will be imperative to have completed all the stages necessary to ensure that a Protocol be opened for signature prior to the Fifth Review Conference, which is to be held no later than 2001. The European Union therefore considers that the negotiation on a Protocol should continue to be a high priority for the international community in 1999. To this end it will actively promote the work of the Ad Hoc Group, with a view to achieving substantive progress by the end of 1999, so that the Protocol can be adopted by a Special Conference of States Parties in 2000." {EU website}

28 December In Iraq, where the leadership has now declared that it will no longer recognise the no-fly zones established in the north and the south of the country, US aircraft patrolling the southern zone attack and destroy an anti-aircraft battery. France, the United Kingdom and the United States had established the southern zone in August 1992, extending it four years later [see 31 Aug 96]; the northern zone, protecting the UN safe haven there, has been in place since the 1991 ceasefire. So begins what will soon become a succession of

small attacks by US and, later, British aircraft directed against Iraqi air defences. The US and British rules of engagement gradually expand to embrace new categories of target in both no-fly zones, and a war of attrition appears to have begun. {London *Independent* 3 Feb, London *Daily Telegraph* 5 Feb, *International Herald Tribune* 6-7 Feb, London *Observer* 7 Feb}

29 December In Moscow, the presidency has issued a decree accepting the resignation of Pavel Syutkin as chairman of the President's Committee on CBW Convention Problems [see 22 Jun 94]. {ITAR-TASS 29 Dec in BBC-SWB 29 Dec}

29 December In Scotland, where police forces have been evaluating the CS Spray weapon [see 24 Sep] during a recently concluded one-year trial period, Tayside Police announce that, although the force will continue to use the weapon in Dundee, it will not do so throughout the rest of its area, given the fact that the government has commissioned a health review. {Tayside Police press release 29 Dec} The announcement makes no express mention of one other cause for concern, namely the findings of a study commissioned from CBD Porton Down by the Police Scientific Development Branch of the Home Office which, although withheld from publication when it was completed in November 1997, has recently been summarized by *Police Review* {20 Nov}: the study warned that the solvent used in CS Spray, namely MIBK, was too toxic to be considered safe. The Home Office shortly afterwards announced that the PSDB has a programme, currently in progress, to identify possible alternative solvents [see also 19 Nov UK] {*Hansard (Commons)* written answers 17 Dec}.

30 December In Los Angeles District Court, charges under the Biological Weapons Anti-Terrorism Act of 1989 (which is the US domestic implementation of the Biological Weapons Convention) are brought against an accountant, Harvey Spelkin, who two weeks previously is alleged to have telephoned an anonymous warning to the bankruptcy court before which he was scheduled to appear announcing that anthrax had been released into the air-conditioning system of the court-house building; a hundred people had to be evacuated. {*Los Angeles Times* 19 Dec} In fact there had been no release of anthrax, and, according to the local FBI office, the episode was the twentieth such anthrax hoax in southern California since 21 October {*Los Angeles Times* 31 Dec}. On the night of 26/27 December, for example, some 800 people at a night-club in Pomona had been quarantined for four hours while police, county hazardous-materials teams and the FBI domestic terrorism task force responded to an anonymous phone call stating that anthrax had been released into the air of the club {*Los Angeles Times* 28 Dec}. Again, on 24 December, in the wake of a similar call to a department store in Palm Desert, the 200 shoppers and employees there were ordered into the parking-lot where they were made to strip off their clothes and rinsed down with bleach. Since late November, anthrax-hoaxing has reportedly caused nearly 3000 people to be evacuated from buildings and detained for hours. Los Angeles city officials believe that the anthrax threats are not related to one another but are instead "copycat" episodes. {*New York Times* 29 Dec, AP from Los Angeles 30 Dec} Nor has the hoaxing been confined to California [see also 18 Aug Wichita]. The Centers for Disease Control and Prevention (CDC) has been monitoring the hoaxes and the responses to them, which have often involved great confusion among police and health officials, and is working on guidance for public health authorities called upon to deal with anthrax allegations. Interim CDC guidelines are issued on 5 February.

{UPI from Coppell, Texas, 4 Dec, *Washington Post* 11 Jan, CDC *M&MWR* 5 Feb}

January In South Korea, an article from the Agency for Defence Development published in *Pukhan* {Jan in FBIS-EAS 21 Jan} [see Nov 98] provides detail on the history and current status of North Korean CBW-weapons capabilities. On chemical weapons, the article largely but not entirely repeats information already published [see 1 Aug 96, but compare 6 May 97], including the statement that North Korea holds 2,500–5,000 tons of them, mostly filled with mustard gas, phosgene, sarin and V agents. On biological weapons, the article states that their development in North Korea "seems to be sluggish compared with its chemical weapons development", this being due not so much to lack of interest as to the low technical level of biology and medicine there. That level, however, is improving, leading to the conclusion that "there has been much progress in the development of biological weapons, too".

January The new US Defense Threat Reduction Agency [see 1 Oct 98] is establishing an Advanced Systems and Concepts Office (ASCO) to conduct analyses of emerging threats and future concepts and technologies for dealing with them. ASCO is to consist of a small core of military and civil-service personnel plus people brought in for short periods from industry, academia and other government agencies: 20-30 people in all, headed by Dr Victor Utgoff, formerly of the Institute of Defense Analyses. {*Connection* Jan}

3 January In Scotland, a defence spokesman of the Scottish Nationalist Party, Lt-Col Stuart Crawford, comes under widespread criticism from other political parties for the view he is said to have expressed in a year-old pamphlet that an independent Scotland should, for deterrent purposes, consider ballistic missiles armed not with nuclear warheads but with the cheaper alternative of chemical or biological warheads. {*Glasgow Herald* 4, 6 and 8 Jan}

4–22 January In Geneva, the Ad Hoc Group of states parties to the Biological Weapons Convention reconvenes [see 14 Sep 98] for its thirteenth session of work on the projected Protocol that will, in the words of the Group's mandate [see 19–30 Sep 94], "strengthen the effectiveness and improve the implementation of the Convention". Participating are 65 states parties and five other signatory states. {BWC/AD HOC GROUP/44 part I} [For further details, see *Progress in Geneva*, above.] At the close of the session, its Chairman, Tibor Tóth of Hungary, tells reporters: "We have a lot, a lot to do. This session was useful for setting the stage for the next session in March, especially on the issue of visits." He also says that, thanks to a change of the Russian position, agreement on creating an international organization to oversee the treaty was now nearer. {AP, AFP and Reuter from Geneva 22 Jan} The day previously, USACDA Director John Holum had told reporters: "My own judgement is I was disappointed at this first session [of 1999]. At the same time, we have crystallized some important decisions that will need to be made between now and the next session. I am still optimistic that by the end of this year or early next year, we will get to ... a basic text on the content of this treaty protocol. That will require a great deal of work." {Reuter from Geneva 22 Jan}

6 January In Japan, government officials say that, in April, the task force [see 1 May 98] that has been collecting information on technologies for disposing of the abandoned chemical weapons in China [see 9 Dec 98] will release a report on its work, and that an office to promote the disposal will be estab-

lished within the Office of the Prime Minister; that the removal of the weapons will commence during the year beginning April 2000; and that during or after April 2001 private-sector participants in the disposal project will be selected through international competitive bidding. The total project costs are estimated at ¥200–300 billion. {Jiji from Tokyo 6 Jan} Officials later say that the new office will be staffed by 20–30 people from different ministries, including the Foreign Ministry, and will be an expansion of the coordination team headed by Seigi Hinata [see 14-31 Oct 98] that has been working in the Prime Minister's Office. Plans are that the facility to be built in China to help with the disposal work will have been constructed by fiscal year 2003. An increased total-cost estimate is now being quoted, namely at least ¥500 billion (US \$4.3 billion). {Asahi from Tokyo 25 Jan, Kyodo from Tokyo 28 Jan in BBC-SWB 28 Jan}

6 January UNSCOM operations in Iraq, especially the use of electronic eavesdropping equipment in the campaign against Iraqi concealment activities [see 25 Sep 98], were deliberately promoted and exploited by US agencies in order to penetrate the internal security infrastructure of Iraq and thereby collect intelligence applicable in US efforts to undermine the Iraqi regime [see also 3 Dec 98], so it is reported in the United States by the *Boston Globe* {6 Jan} and the *Washington Post* {6 Jan}. The *Post* attributes the story to unidentified “confidants” of UN Secretary-General Kofi Annan, stating, moreover, that the Secretary-General himself “has obtained what he regards as convincing evidence” of the story.

US State Department spokesman James Rubin, talking to reporters about the story, affirms the need for UNSCOM to have taken strong measures against Iraq’s “aggressive posture of concealment, denial and obstruction” regarding its weapons of mass destruction, and says, after confirming that there had been “intelligence cooperation with UNSCOM by the United States” just as there had been between UNSCOM and many other countries: “[O]ur support was specifically tailored to facilitate UNSCOM’s mission and for no other purpose, and was done at the direct request of UNSCOM.” He adds: “At no time did the US work with anyone at UNSCOM to collect information for the purpose of undermining the Iraqi regime”. {*USIS Washington File* 6 Jan} UNSCOM Executive Chairman Richard Butler tells reporters: “In every case of assistance given to us, including technical assistance provided by the United States of America, we have only ever accepted and used that assistance in the pursuit of our disarmament mandate. ... Are we spies? Absolutely not.” His predecessor in office, Ambassador Rolf Ekéus, issues a similar statement. {*International Herald Tribune* 7 Jan} These assurances are echoed in the formula later used by the British government when asked about its intelligence links: all information exchanges between the UK and UNSCOM, and all activities carried out by UK nationals serving as UNSCOM inspectors “have been strictly in pursuit of UNSCOM’s mandate to dismantle Iraq’s WMD capability” {e.g., *Hansard (Commons)* written answers 25 Jan}.

The Office of the Spokesman for the Secretary-General issues a statement: “Let me first remind you that the Secretary-General has no operational oversight responsibility for the Special Commission — that is the Security Council’s job, because UNSCOM is a subsidiary body of the Council. He, therefore, has little detailed information on day-to-day operations. The Secretary-General has, however, been aware for some weeks that a number of journalists have been pursuing this story. When he first heard of these allegations, he asked UNSCOM’s Executive Chairman, Richard Butler, about them. Ambassador Butler categorically denied them. We not only have no con-

vincing evidence of these allegations; we have no evidence of any kind. We have only rumours. Neither the Secretary-General nor any member of his staff has access to classified United States’ intelligence, although UNSCOM does. The Secretary-General, therefore, rejects the characterization of his state of mind attributed to so-called ‘confidants’, such as that he is convinced of things, aware of facts, and so on. Obviously, were these charges true, it would be damaging to the United Nations disarmament work in Iraq and elsewhere. Finally, The *Washington Post* says that the Secretary-General is trying to pressure Richard Butler to resign. THIS IS NOT SO. In any case, the issue is not the Executive Chairman; it is how to get on with the work of disarming Iraq of its weapons of mass destruction.” {UN press release SG/SM/6858 6 Jan}

The matter develops into prolonged and acrimonious controversy, attracting much comment on the possible identity of its prime movers, on what the episode portends for the future of UNSCOM, and on the delicacy of the distinction between “intelligence support” and espionage. There is also reporting on the eavesdropping methods used by UNSCOM and their support by British and US specialists, including contradictory accounts emanating from former UNSCOM Chief Inspector Scott Ritter [see 25 Sep].

11 January In Ukraine, an interview with an official of the Ministry of Foreign Affairs Department for Conversion of Chemical and Biological Weapons, Arkadiy Arkadyovich Anisimov, about the former USSR biological-weapons programme, in which he had himself once worked, is reported in *Ukrayina Moloda* {11 Jan in FBIS-TAC 13 Jan}. On the 1979 Sverdlovsk anthrax outbreak [see 4 Aug 98] Dr Anisimov had said: “At that time, under the conditions of increased secrecy, filters were damaged during a regular experiment with biological weapons and lethal bacteria were discharged outside the premises of a military facility. I know this issue well.” On the allegations that Soviet troops in Afghanistan had used biological weapons, the newspaper reports Dr Anisimov saying that it can be extremely hard to differentiate natural and unnatural outbreaks of disease but then reports: “However, according to an entire array of signs (the incubation period and the quickness of mutations) a few outbreaks of epidemics in Afghanistan resemble the action of biological weapons. Yet the Americans have been no saints either as far as this issue is concerned.” The newspaper then goes on to recall the allegation that a thrips-infestation in Cuba had resulted from US biological warfare [see 15 Dec 97].

The interview has also touched on anti-materiel biological weapons, including exploitation of bacteria that can accelerate the process of oxidation in aluminium alloys, and ones that can metabolize petroleum fuels and lubricants.

Dr Anisimov is reported as saying that, in the USSR, there were once over 150 enterprises of the biological industry capable of producing biological weapons; 50 of these, and a powerful scientific base, remained in Ukraine. He had then spoken of the problem of dual-use technology, which manifested itself, not only in applicability both to biological weapons and to peaceful enterprise, but also in applicability both to biological weapons and to anti-BW protection. He had pointed to the Ukrainian role in current efforts to strengthen the Biological Weapons Convention, the newspaper observing: “Perhaps it is no accident that initiatives to introduce a mechanism of ‘hobbling’ the developers of ‘combat bacilli’ in the immediate future are coming from the banks of the Dneiper to Geneva”. Dr Anisimov had said: “This is an extremely difficult task. Nevertheless, we have found the golden means making it possible to impose a number of restrictions on the owners of top biotechnologies without causing a considerable damage to the

security of these countries and essential losses to the industries connected with these leading and promising technologies that will help mankind feed itself and overcome diseases.”

11 January In Geneva, during the thirteenth session of the BWC Ad Hoc Group [see 4–22 Jan], a briefing for delegations is provided by the Quaker United Nations Office in conjunction with the University of Bradford Department of Peace Studies at which two further Bradford briefing papers on *Strengthening the Biological Weapons Convention* are presented: one by the editors of the series, Graham Pearson and Malcolm Dando of the University of Bradford — namely, *Visits: An Essential and Effective Pillar* — and one by the HSP Hague Researcher, Daniel Feakes, *The Future BTWC Organization: Observations from the OPCW*. The briefing, given by Professor Pearson, is attended by 70 people from 34 delegations.

11–12 January In Washington the Carnegie Endowment for International Peace convenes the 7th *Carnegie International Non-Proliferation Conference* on the theme “Repairing the Regime”. Its several concurrent sessions include one on “Chemical and Biological Weapons: Terrorist Threats, Warfare Realities”.

12 January In New York, at a meeting of the five permanent members of the UN Security Council, France tables a paper, *Iraq — French contribution in the search for a solution*, proposing a modified control regime for Iraqi weapons of mass destruction, one that “would no longer be retrospective but would become preventive”, and a lifting of the oil embargo. {AP from the UN 13 Jan, AFP from Paris 13 Jan} Russian Permanent Representative Sergey Lavrov speaks, during a television interview {Russian Public TV 12 Jan in BBC-SWB 12 Jan}, of a possible role for the OPCW [see also 17 Dec 98 OPCW], and, next day, when the French proposal is presented at a full meeting of the Security Council {*International Herald Tribune* 14 Jan}, welcomes its “general thrust” {AP from the UN 13 Jan}. US Ambassador Peter Burleigh, meanwhile, has stated that “any change in the sanctions regime that says that Iraq has met its disarmament requirements is unacceptable” {Reuter from the UN 13 Jan}. The search for a solution to this rift of the Security Council continues. Among the numerous proposals to emerge is a procedural recommendation by Canada suggesting that two committees of wide membership be set up, one to review the status of Iraqi disarmament, the other to review the humanitarian situation in Iraq, and both to make recommendations {*Disarmament Diplomacy* Dec/Jan}. The proposal is later expanded to include a third panel, one that would assess Iraqi compliance with Security Council resolutions on prisoners of war and on Kuwaiti property and archives. Russia seeks the abolition of UNSCOM and its replacement by a “monitoring centre” in New York with an office in Baghdad. {*USIS Washington File* 27 Jan, Reuter from the UN 29 Jan}

13 January President Clinton transmits to the US Congress certifications required under Condition 9 (Protection of Advanced Biotechnology) and Condition 7.C.i (Effectiveness of Australia Group) of the Senate CWC-ratification resolution [see 24 Apr 97]. Both are required annually, and both repeat the wording used the year previously [see, respectively, 31 Dec 97 and 29 Apr 98] except that the second of them also states: “For your information, the Australia Group has not loosened its controls on chemical and biological weapons-related items since the entry into force of the Chemical Weapons Convention.” {US Newswire 14 Jan}

16 January The UK medical journal *The Lancet* {353: 169-82} publishes in two articles the findings on Gulf War illnesses in UK veterans from a study funded by the US Defense Department [see 20 Jun 96] but otherwise independent of it and of the UK Ministry of Defence. Veterans groups are reportedly saying that around 12 percent of the UK personnel that served in the Persian Gulf war are now ill {Reuter from London 14 Jan}. The reported study had been led by Professors Simon Wessely and Anthony David of King’s College London, they and five others of the eleven authors constituting a special Gulf War Illness Research Unit established at Guy’s, King’s and St Thomas’s Medical School. The study had been based on responses to a questionnaire asking about deployment, exposures, symptoms and illnesses that had been mailed to 4,246 of the 53,462 UK Gulf War veterans, 4,250 of the 39,217 UK service personnel who had served in Bosnia during 1992–97, and 4,246 of the 250,000 personnel serving in the armed forces at the beginning of 1991 who were not deployed to the Gulf; the overall response rate had been just over 65 percent. Analyses of responses had led to the conclusion that soldiers who served in the Gulf War had indeed been suffering much higher levels of illness those who had served in Bosnia or who had remained at home, but their illnesses did not, however, fit a unique Gulf War syndrome. The most likely explanation, according to the study leaders, is that the experience of war had damaged health independently of any actual injury; this seemingly obvious truth had been obscured by the carnage of earlier wars {London *Independent* 15 Jan}, though in fact it is observable in the medical historical record back even to the Crimean war {*The Lancet* 16 Jan}. However, one of the articles also observes: “Finally, we cannot exclude possible unique biological mechanisms that link Gulf War service and later ill health. We have shown an adverse effect of multiple vaccination specific to the Gulf War and aim to confirm this finding in further studies. ... A fuller understanding of why service in the Persian Gulf War was associated with a definite decline in general well-being will come from assessment of the effects of true and perceived exposure to physical and psychological adversity, and the interaction between the two.”

The UK Ministry of Defence announces that it will be considering these results in detail and that there will be an approach to the Medical Research Council and the independent panel [see 12 Nov 98] for their advice on future action. {MoD press release 14 Jan}

15 January The State of Arkansas issues environmental permits enabling the US Army to issue a notice-to-proceed with the construction of a chemdemil incinerator at Pine Bluff Arsenal to destroy the 3,850 agent-tons of chemical weapons stored there. The prime contractor, Raytheon Demilitarization Co [see 1 May 98], commences the construction work, which is planned to take 32 months, followed by 16 months of testing. Thereafter, chemdemil operations are expected to be complete within another 40 months. {*Pine Bluff Commercial* 16 Jan, AP in *Deseret News* 21 Jan}

17 January In South Africa an extract from the autobiography of ex-President F W de Klerk [see 27 Feb 95 and 25 Aug 98], *The Last Trek — A New Beginning*, is published in which he states that he had been “deeply shocked” to discover that the South African Defence Force had engaged in terrorism while he was in power. This he had learnt from the report which SADF Chief of Staff Lt-Gen Pierre Steyn had produced in 1992 [see 29 Jan 97] after being instructed to investigate the intelligence functions of the Defence Force following reports of abuse. One “particularly shocking” allegation in the Steyn Re-

port was that “elements of the Defence Force had been involved in carrying out a chemical attack on FRELIMO soldiers in neighbouring Mozambique” [see 23 Jul 92]. {SAPA/AFP from Johannesburg 17 Jan}

18 January Turkey, through its embassy in Athens, issues a statement denying recent Greek press reports: “Turkey categorically has no intention of producing nuclear, biological or chemical weapons. Turkey is a signatory to all the disarmament and arms control agreements that also concern weapons of mass destruction, and it will continue to abide by these agreements to which it is a signatory.” {Anatolia news agency 18 Jan in BBC-SWB 18 Jan}

18 January The UK Ministry of Defence issues to Members of Parliament a revised assessment of the effects of the Anglo-American *Desert Fox* attack on Iraq. As regards Iraqi CBW capability, the ministry states: “We have badly damaged, possibly destroyed outright, the L-29 unmanned aerial vehicle programme (‘The Drones of Death’) developed for the delivery of biological and chemical weapons. We have set back his biological and chemical weapons capability, including through attacks against production and research and development facilities. We have also successfully disrupted infrastructure and destroyed key buildings occupied by the Special Republican Guard and Special Security Organisation units who concealed and controlled the chemical and biological programmes. The Directorate of General Security in particular lost some of its most important buildings, which we believe contained key equipment and documents.”

The so-called “Drones of Death” programme had been attacked at Tallil airbase near An Nasiriyah in the south by Royal Air Force Tornado aircraft on 17 December. Chief of Defence Staff Charles Guthrie had told reporters next day that Iraq had possessed upwards of a dozen of the aircraft, whose development had been accorded a high priority since 1995 [see 6 Oct]. They were based on old Czech-made L-29 training aircraft, modified for guidance by a ground-controller and apparently adapted to carry two 150-litre underwing spraytanks capable of disseminating an “anthrax-like substance”. {*The Scotsman* 19 Dec, London *Sunday Telegraph* 20 Dec, *Jane’s Defence Weekly* 6 Jan} Other L-29s had been targeted at Al Sahra, near Tikrit, by US forces {*Washington Post* 17 Jan}

19 January In Switzerland, during an address to the BWC Ad Hoc Group during its Thirteenth Session [see 4–22 Jan], the Secretary of State for Foreign Affairs, Jakob Kellenberger, proposes that Geneva should host the headquarters of the projected BWC international authority [see also 25 Nov].

19 January President Clinton, in his State of the Union address to Congress, includes reference to two budget initiatives concerning CBW. First, he says: “We must work to prepare local communities for biological and chemical emergencies, to support research into vaccines and treatments”. Second, the President says that his new budget will be requesting a two-thirds increase over the next five years in spending on efforts to restrain the spread of weapons of mass destruction. National Security Adviser Samuel Berger tells reporters that one of the intentions in the second initiative is to bring the five-year funding for Cooperative Threat Reduction (Nunn–Lugar) and related programmes in the State and Energy Departments, including “work on helping Russia convert out of chemical and biological weapons”, up to a total of \$4.2 billion. {*USIS Washington File* 19 Jan}

19 January In Washington, the International Association of Counterterrorism & Security Professionals (founded in 1992) hosts a conference on *Terrorism: Trends and Forecasts for 1999*. Among the speakers is Robert Blitzer [see 12 Mar 96 and 2 Oct 98], formerly chief of the FBI counterterrorism planning section and now associate director of the SAIC Center for Counterterrorism Technology and Analysis. He talks of the “tremendous upsurge” of hoax terrorist incidents over the last few months, which had been running at 5–10 incidents per day at the time of his departure from the FBI a month previously, most of them attributable to “lone offenders”. He categorizes terrorists into different groups, and, in regard to chemical/biological armament, observes that even well resourced and skilled organizations such as Aum Shinrikyo have had, and will continue to have, difficulty acquiring “the technology to really put a good dispersal device together, particularly in the area of bio”. He continues: “[Y]ou’ve got to remember, they’re all afraid of it, this is scary stuff, they’re afraid to handle it, so they have to have the right kind of laboratory environment, and the right kind of educated individuals, and the right kind of equipment to develop this capability. Not that it’s not out there, I’m just saying that’s the difficulty.” {FNS transcript 19 Jan}

20 January The Australian Defence Department has stated a requirement for an air-launched weapon capable of destroying stocks of CBW weapons, so it is reported in *Flight International* {Reuter from Canberra 21 Jan}: an extremely high burn-temperature non-nuclear warhead that can be fitted to a stand-off weapon having a range of more than 100 nautical miles.

20 January Indiana University Press has just published a scholarly new study of the allegations of biological warfare that were made against the United States during the Korean War [see 10 Nov 98]. The study, *The United States and Biological Warfare: Secrets from the Early Cold War and Korea*, is by Stephen Endicott and Edward Hagerman, who are historians at York University, Toronto. It draws extensively from US, Chinese, Canadian and other state archives. The basic conclusion is set out by the authors in their preface: “Together, these U.S., Canadian, and Chinese documents provide strong corroborative evidence that the United States experimented with biological weapons during the Korean War.”

20 January US Defense Secretary William Cohen tells a news conference that the administration will be seeking \$6.6 billion over the next five years for a National Missile Defense system in order to counter a growing threat of ballistic missile attack by “rogue states” both against US forces deployed overseas and against the homeland. He says that when the time for actual deployment arrives, it might become necessary to seek modifications to the bilateral 1972 ABM Treaty, even to withdraw from it. {Reuter from Washington 21 Jan, *International Herald Tribune* 22 Jan}

21 January In Israel the Mossad has reportedly estimated that Iranian nuclear and CBW weapons programmes are now being assisted by upto 10,000 Russian experts [see also 8 Dec 98], so it is stated by the London newsletter *Foreign Report*. {*Jerusalem Post* 21 Jan}

21 January At a London news conference, the British Medical Association launches a 152-page monograph, *Biotechnology, Weapons and Humanity*, which is the report on genetic weapons that the BMA Board of Science and Education had commissioned some 18 months previously [see 1 Jul 97], and of which Professor Malcolm Dando of the University of Bradford

Department of Peace Studies is the principal author. The report is a careful study of some of the weapons applications that are, or might become, within reach of the biotechnology that is now being pressed rapidly forwards by advances in its underlying sciences, advances exemplified by the Human Genome Project and by the concepts of gene therapy that are now starting to enter application. The report pays special attention to the possibility of weapons being developed that affect particular versions of genes clustered in specific ethnic or family groups — 'ethnic cleansing weapons', as one newspaper subsequently calls them {London *Financial Times* 22 Jan}. The report reviews the available countermeasures against such developments and, in its array of 17 specific recommendations, lays emphasis on linked national and international control regimes having at their core a strengthened Biological Weapons Convention. At the launch, BMA officials are anxious to avoid charges of scare-mongering: Professor Vivienne Nathanson, head of Health Policy Research, says "We went into this being very sceptical, with a position that 'It can't be done', but then, after examining what is going on, we decided that it might be possible after all". {London *Independent* 22 Jan} She also says: "It would be a tragedy if in 10 years time the world faces the reality of genetically engineered and possibly genetically targeted weapons. It is not technology ... that is available today, but it is becoming increasingly available. We do have a window of opportunity before weapons of that type are manufactured to make sure we have effective measures of prevention." {Reuter from London 21 Jan}

21 January US Air Force authorities at Travis AFB in California have decided to bring Airman Jeff Bettendorf before a court martial for refusing an order to submit to anthrax immunization {AP from Travis Air Force Base 21 Jan}. More than 166,000 service personnel have already begun the course of injections needed under the forces-wide anthrax immunization programme [see 14 Aug 98], with 72 refusing, most conspicuously 8 officers — veteran combat pilots — of the Connecticut Air National Guard {Seattle *Post-Intelligencer* 26 Dec, *Hartford Courant* and Baltimore *Sun* 15 Jan, Honolulu *Star-Bulletin* 26 Jan, Baltimore *Sun* 30 Jan}. A common reason given for refusal has been mistrust of the military's vaccines because of the persistent controversies over "Gulf War Syndrome" [see also 2 Dec Canada], and there is also contradictory information about the efficacy of the particular anthrax vaccine that is being used {*Christian Science Monitor* 28 Jan}. Airman Bettendorf is the first refuser to be court-martialled, though in the end he opts for discharge under "other than honorable conditions" {Reuter from Travis AFB 1 Feb, *San Francisco Chronicle* 27 Feb}.

22 January At London Heathrow airport, Customs and Special Branch police officers have, during the past week, detained an Israeli journalist travelling to Geneva, seizing his laptop computer, papers and a videotape in order to determine, so it is later reported, "whether they contravene export regulations". The journalist, Shraga Elam, is said to be "suspected of carrying restricted items relating to the production of chemical weapons". London newspapers subsequently report that the journalist had been interviewing a British woman, Joy Butler-Markham (née Kiddie), said to have become unwittingly involved early in 1994 in an SIS scheme to infiltrate a clandestine Iranian chemical-weapons programme by providing special production equipment for it, a scheme which apparently overlapped with, or built upon, a secret Israeli attempt in which Ms Kiddie had become involved in 1990, through Nahum Manbar [see 17 Jun 98], to trade a supply of the CW-agent precursor thionyl chloride from China in return for information about a

downed Israeli airman, Ron Arad, believed to be in the hands of Hizbollah. The responsible SIS officer is reportedly the same Richard Tomlinson, now living in Switzerland, whose book the SIS has been acting to suppress [see 20 Sep 96], an outline of which the Tel Aviv newspaper *Ha'aretz* has just published. {London *Guardian* 22 Jan, London *Observer* and London *Sunday Times* 31 Jan} [Note: this apparent abuse of export-control law by UK secret services coincides with an initiative by the UK government to introduce new export-control legislation that would give government agencies still greater powers: see 1 Dec 98 UK.]

22 January President Clinton, speaking at the US National Academy of Sciences, says: "In my budget, I will ask Congress for \$10 billion to address terrorism and terror's emerging tools. This will include nearly \$1.4 billion to protect citizens against chemical and biological terror, more than double what we spent on such programs only two years ago. We will speed and broaden our efforts, creating new local emergency medical teams, deploying in the field portable detection units the size of a shoe box, to rapidly identify hazards; tying regional laboratories together for prompt analysis of biological threats. We will greatly accelerate research and development, centered in the Department of Health and Human Services, for new vaccines, medicines, and diagnostic tools. I should say here that ... the government has got to fund this. There is no market for the kind of things we need to develop. And if we are successful, there never will be a market for them. But we have got to do our best to develop them. These cutting-edge efforts will address not only the threat of weapons of mass destruction, but also the equally serious danger of emerging infectious diseases. So we will benefit even if we are successful in avoiding these attacks." {FNS transcripts 22 Jan} [See also 19 Jan.]

President Clinton had the day previously given the *New York Times* a half-hour interview specifically on biological weapons and bioterrorism {White House press release 23 Jan}.

25 January In Russia, the chief of the Defence Ministry Main Directorate of International Cooperation, Col Gen Leonid Ivashov, categorically denies Western reports that Russia is helping Syria to develop chemical weapons: "Russia is not co-operating with anyone in that sphere anywhere" {Interfax 25 Jan in BBC-SWB 25 Jan}. The London *Times* had the day previously reported that, according to British intelligence sources, unofficial secret links between Syria and former Russian officials have been uncovered and that "it is now feared that sophisticated Russian technology has been passed to Syria by former members of Moscow's chemical weapons project" [see also 20 Oct 95 and 22 Jun 98].

25 January The OPCW Technical Secretariat now has 476 people from 66 countries working in fixed-term posts, including 195 inspectors and 14 inspection assistants [see also 8 Apr 98] {*OPCW Synthesis* Jan/Feb}. About another 40 people are on temporary assignment, short-term contract, loan, or other such arrangements.

25 January UNSCOM Executive Chairman Richard Butler transmits two special reports to the UN Security Council, one on the current state of affairs with respect to the disarmament of Iraq's proscribed weapons, the other on ongoing monitoring and verification in Iraq {*International Herald Tribune* 27 Jan, *Washington Post*, 28 Jan}. The disarmament report, of 199 pages, is in four main parts: on the record and methodology of UNSCOM's work; identification and explanation of the first-priority issues awaiting resolution; three annexes on the status of

verification of those of Iraq's proscribed weapons programmes for which UNSCOM is responsible — missiles, chemical, and biological; and an annex on actions by Iraq to obstruct disarmament. The great quantity of detail contained in this report, much of it thus far unpublished, is presented dispassionately and systematically: an account of work evidently conducted with dedication and skill under conditions of adversity, which is still far from complete.

The OMV report, of 73 pages, reviews in detail the compliance-monitoring system, including its Export/Import mechanism, that had been in place, and presents an assessment for the future which takes into account "the possibility that the mandated objective of the full accounting of Iraq's proscribed weapons and verification of Iraq's prohibited programmes will not be achieved but the Commission may, nevertheless, be required to operate its OMV system under the shadow of Iraq possibly retaining prohibited materials". The report also presents estimates of the resources needed to operate the OMV in the years ahead: an annual budget of upwards of \$75 million for a staff of at least 350 personnel plus the same number again of visiting outside specialists, all of this presupposing that any change in the sanctions regime will not necessitate an increase in the resources devoted to the ExIm mechanism.

Meanwhile, increasingly candid accounts of UNSCOM and the support given to it by the UN Security Council are being related by some of its members and staff, adding yet more to the public record. Ambassador Butler is among them; an interview with him which the *Sydney Morning Herald* publishes on 27 January causes Russian Foreign Minister Igor Ivanov to write to the UN Secretary-General demanding that Ambassador Butler be dismissed, a Russian Ministry spokesman telling reporters: "Neither his professional qualities, nor his moral qualities allow Butler to stay in his job. He should be fired as soon as possible." {AFP from the UN 29 Jan}

26 January Egypt, through its permanent representative at the Conference on Disarmament, Ambassador Mounir Zahran, renews its request that UNIDIR — the UN Institute for Disarmament Research — undertake a study on radiological weapons. Ambassador Zahran further asks that it "include any other categories of weapons of mass destruction being developed in the laboratories and research centres of any State". He recalls President Mubarak's proposal not only to establish an area free of weapons of mass destruction in the Middle East but also to convene an international conference to ban the production or use of weapons of mass destruction anywhere in the world. {CD/PV.810}

26 January UK Defence Secretary George Robertson responds to a question in Parliament about the review of the longer-term actions necessary to ensure a coherent UK response to threats from biological and chemical weapons of which he had spoken three months previously during the Commons debate on the Strategic Defence Review [see 19 Oct 98]. He says that he will publish the outcome of the review as soon as possible. {*Hansard (Commons)* written answers 26 Jan} There has been speculation in the press that the government is examining plans to set up a stockpile of vaccines and therapeutic drugs as part of a new "battle strategy" to defend the country against CBW attack. The plans reportedly also include the creation of a new organization within the Ministry of Defence to coordinate anti-CBW efforts and to liaise with other government departments and DERA/CBD Porton Down. {London *Sunday Telegraph* 11 Oct}

27 January In Iran, Foreign Ministry spokesman Hamid-Reza Asefi rejects allegations that the government is pursuing a CBW weapons programme: "We categorically deny these accusations, because we have no intention of possessing such satanic weapons" {AFP from Tehran 27 Jan}. The allegations had been made in Washington the day previously in the *Washington Times* {26 Jan}, whose columnist Arnold Beichman reported information "provided by a mujahedin intelligence network and presented publicly by the National Council of Resistance of Iran", and at a news conference addressed by US representatives of that Council. One such representative, Soona Samsami, had said: "Clearly, as far as weapons of mass destruction are concerned, [President Mohammad] Khatami is following in the footsteps of his predecessors and has launched an all-out effort to expand the program". Identical words are used by another Council representative some ten days later at a similar news conference in Rome. Beichman had written: "Immediately upon his election [see 23 May 97], Mr Khatami is said to have created a science and technology group of advisers to supervise the regime's chemical, biological and nuclear weapons programs with headquarters in the Mahsa Building in Tehran. Heading this group is Taqi Ebtekar and its director is Bahari-Pour. Four different groups are now engaged in producing biological weapons." These groups were said to be within the Ministry of Defence Special Industries Organization, the Construction Crusade Research Center, the Imam Hossein University (where there was a Revolutionary Guards Corps BW project) and the Biotechnology Research Center. Beichman had continued: "The mujahedin sources say they have identified an additional six germ warfare research and production centers that ostensibly are purely commercial enterprises" one of these "focuses on the lethal VX microbes". Foreign experts had been recruited into the program: "In charge of such overseas recruitment is Brig Gen Mahammed Fa'ezzi, who has signed up a few Russian Scientists [see also 21 Jan], some with one-year contracts. Currently there are 14 foreign specialists — Chinese, Korean and Russian — working for the Ministry of Defense Special Industries Organization; at least four Russians are working for the Defense Ministry Industries; eight Russian or Ukrainian scientists were working at the Pasteur Institute." {AP from Washington 26 Jan, Reuter from Rome 4 Feb}

27 January In the Netherlands, public hearings begin into the 1992 Israeli cargo-aircraft crash near Amsterdam Schiphol airport. The hearings form part of the special parliamentary inquiry initiated three months previously in response to new disclosures about the nature of the cargo [see 30 Sep 98]. The focus of the inquiry is on the relationship between the crash and unexplained illnesses that have since affected some rescue workers and local residents who escaped the inferno. The 5-person parliamentary committee plans to take evidence from some 70 people, including Prime Minister Wim Kok and his predecessor Ruud Lubbers, over the next six weeks. {Reuter from The Hague 27 Jan, *International Herald Tribune* 8 Feb}

28 January In Japan, the National Police Agency discloses findings from a survey of people who had been affected by the release of sarin nerve-gas in the Tokyo subway system in March 1995 by Aum Shinrikyo. Of the 5300 people who had originally been hospitalized or reported themselves affected, 1247 had responded to a police multiple-choice questionnaire. Of the respondents, 54 percent said they had physical ailments that they attributed to the nerve gas, and 57 percent said they had some sort of psychological disorder. Some 80 percent of the respondents said they had experienced constriction of their

field of vision during the immediate aftermath of the attack. {Kyodo and AFP from Tokyo 28 Jan}

28 January In Israel, smallpox virus [see 20 Nov 98] is held by a Ministry of Health laboratory, according to *Yedioth Aharanot*. The ministry states, however, that its "laboratories do not work with the smallpox virus". {AFP from Jerusalem 28 Jan}

28 January In Russia, the chief of the Defence Ministry RKhB Protection Troops, Col Gen Stanislav Petrov, says to reporters: "The leakage or transfer of chemical weapons to other countries is out of the question. Russia strictly complies with its international obligations and Russian scientists do not help anyone to create such weapons." He is responding to an editorial in the 21 January *New York Times*, which had said that there was "an unacceptably high risk" of material from "Moscow's still formidable stocks of nuclear bombs, nuclear ingredients and biological and chemical warfare agents" being sold to "potential aggressors like Iraq, Libya, North Korea or Serbia". He is especially critical of the mentioning of Serbia as a possible buyer of Russian toxic agents. {ITAR-TASS from Moscow 28 Jan}

29 January In Tokyo District Court, during the continuing trial of Aum Shinrikyo leader Shoko Asahara, cultist Shigeo Sugimoto states in evidence that on several occasions during April and May 1990, and once in August 1993, he and another senior cultist had sprayed botulin from a specially adapted car against the Diet building, the Imperial Palace and the US Embassy; but the attempts had killed no one. {*Japan Times* 1 Feb}

29 January In Saudi Arabia, National Guard personnel have been working with a US interagency team to conduct a study of possible changes in the health status of the Guard or their families since the Gulf War. The US team has been convened by the Defense Department Office of the Special Assistant for Gulf War Illnesses. {GulfLink from Washington 29 Jan}

30 January In Taiwan, the Industrial Development Bureau has been warning local manufacturers that they may have to begin producing certain chemicals, ones listed in CWC Schedules, that have hitherto been imported as starting materials for such products as detergents, pesticides, solvents, anti-rusting agents and textile-dyeing agents. The IDB has been assisting local companies in acquiring the necessary production technology from multinational corporations. {*Taiwan Business News* 2 Feb}

30 January In the UK, findings for the first 1,000 UK Gulf-war veterans to be seen at the Defence Ministry's Medical Assessment Programme [see 11 Dec 96] are published in *British Medical Journal* {318: 290-94}. They are consistent with the study recently published in *The Lancet* [see 16 Jan] which indicated that UK Gulf veterans report more illness than comparable groups but without supporting the existence of a unique illness or syndrome. Approaching 3000 of the 53,000 UK veterans have now sought referral to the MAP. The annual running cost of the MAP, which currently forms part of the Baird Health Centre at St Thomas' Hospital, London, is about £750,000. {*Hansard (Commons)* written answers 25 Feb and 19 Oct}

30 January The UN Security Council achieves agreement on a possible way out of its present crisis over Iraq: three panels are to be organised along the lines of the Canadian proposal [see 12 Jan] to review all aspects of Iraq's relations with the United Nations and to make recommendations by 15 April. The

three panels are to be chaired by Ambassador Celso Amorim of Brazil, who will liaise with the President of the Security Council (currently himself) and the UN Secretary-General on the composition and work of the panels. UNSCOM would be but one of several bodies contributing experts for the disarmament and OMV panel. {S/1999/100}

31 January In Iraq, an intelligence cadre known as Unit 2100 "conducted experiments on human subjects using chemical and biological warfare agents", according to a document that had been sent to UNSCOM from the US intelligence community summarizing an interview with a high-level Iraqi defector in Europe. The document is now reported by the *Orlando Sentinel* {31 Jan} which states that the human subjects were political prisoners taken by Unit 2100 from Abu Ghraib prison to a military post at Al Haditha. The newspaper also states that the document was the stimulus for an UNSCOM visit to Abu Ghraib prison in January 1998 during which access to records for the period 1994-95 had been sought but not achieved [see 13 Jan 98], thereby bringing about a new crisis in Iraq-UN relations [see 12 Jan 98, and see also Dec 98].

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

1 February In Washington, lawyers acting for Saleh Idris, the Saudi Arabian businessman whose pharmaceutical plant in Sudan had been destroyed five months previously by US cruise missiles [see 2 Dec 98], meet with staff members of the House of Representatives Permanent Select Committee on Intelligence in order to rebut repeated claims by the administration that Idris is linked to Osama bin Laden [see 22 Dec 98] and that the Al-Shifa plant had been associated with production of VX nerve gas. Mr Idris is seeking compensation from the United States and the release of \$23 million in frozen assets. {*Washington Post* 4 Feb, London *Independent* 5 Feb} The lawyers, it later transpires, now have reports from the detailed investigations they had commissioned, one from Kroll Associates of New York [see 2 Jul 98], which found no evidence of that link between Idris and bin Laden, and another by Dames & Moore of Manchester in conjunction with three European laboratories under the overall direction of Dr Thomas Tullius, chair of Boston University Chemistry Department, which failed to find either the VX-precursor EMPTA, or its degradation product EMPA, in 21 controlled samples taken from 13 locations at the site of the Al-Shifa factory. {*New York Times* 9 Feb, *Chemical & Engineering News* and London *Independent* 15 Feb} ABC News later reports that the US Defense Intelligence Agency had conducted its own review and had concluded that the decision to bomb the factory had been based on "bad intelligence and ... bad science" {*Reuter* from Washington 10 Feb}.

1 February President Clinton submits his budget for Fiscal Year 2000 to Congress. The substantially increased defense spending envisaged in the budget is, among other things, to prepare for what Defense Secretary William Cohen describes to reporters as future "New Age" threats, such as simultaneous chembio attacks on multiple US cities. {*USIS Washington File* 1 Feb} The budget request includes \$1.38 billion for domestic preparedness against weapons of mass destruction [see also 22 Jan] — \$611 million for training and equipping first-respond-

ers and other emergency personnel in the larger US cities, \$52 million to continue the procurement of a national stockpile of vaccines, antibiotics and therapeutic drugs to protect the civil population, \$206 million for protection of federal government facilities, and \$381 million for research and development in new therapies, vaccines, diagnosis, agent detection and decontamination, and the disposition of nuclear material. Speaking of the increased spending here projected for new vaccines and medicines and for public health surveillance, Health and Human Services Secretary Donna Shalala says: "This is the first time in American history in which the public health system has been integrated into the national security system". {*Terrorism & Security Monitor* Jan/Feb, *Aviation Week & Space Technology* 15 Feb} For Defense Department research and development programmes for countering chembio terrorism, \$166 million is sought in the budget. Related Energy Department research and development on detectors, forensics, pathogen gene-sequencing, decontamination, modelling and systems analysis is budgeted at \$31 million for FY 2000. {*Chemical & Engineering News* 8 Feb} The chemdemil budget of the Army is increased from its FY99 level of \$777 million to \$1169 million in FY00 falling to \$986 million in FY01.

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

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

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

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

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

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

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

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

4 February In the US Senate there is a hearing on counterterrorism before the Commerce, Justice and the Judiciary Subcommittee of the Appropriations Committee during which Secretary of State Madeline Albright, Attorney General Janet Reno and FBI Director Louis Freeh give evidence, presenting much detail about current US domestic preparedness efforts, current and planned, including those directed against WMD terrorism. {FNS transcripts 4 Feb}

4-5 February In McLean, Virginia, there is an ACDA International Conference on *Implications of Commercial Satellite Imagery on Arms Control*, organised in conjunction with the Center for Global Security and Cooperation of Science Applications International Corporation, which has also prepared a detailed read-ahead paper for the conference. Some 60 people participate, mostly from the United States. There is close attention to the possible roles of commercial observation satellites in the verification of compliance with the nuclear-weapons Non-Proliferation Treaty, the Comprehensive Test Ban Treaty, and the CWC.

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

5 February In The Hague, a report on the US CWC-implementing legislation [see 19 Oct 98] is published in *OPCW Synthesis* {Jan/Feb} by the US representative to the OPCW, Ambassador Ralph Earle II [see 16 Nov 98 US]. He comments on the three provisions of the legislation that "were not ideal": the stipulation that samples collected for CWC purposes in the United States not be taken abroad for analysis (tracking Condition 18 of the Senate ratification resolution [see 25 Apr 98 President Clinton]); the provision which gives the president authority

to deny, on grounds of national security, a request under the CWC for the inspection of any facility in the United States; and the setting of the low-concentration threshold for Schedule 3 chemicals at 80 percent. Ambassador Earle says that "truly harmful provisions" might have resulted if the administration had reopened the text of the draft legislation after its passage through the Senate [see 23 May 97]. He says: "We believe these three provisions will not harm the treaty's verification in the United States", but makes no comment on their possible effects elsewhere. He concludes his remarks thus: "Having secured implementing legislation, the US Government is working to collect and prepare industry declarations for submission to the OPCW. The next step is to move ahead on issuing regulations requiring companies to submit declaration information. Once these regulations are issued, we expect that it will take approximately six months to finalize the US industry declaration."

In fact, so *Chemical & Engineering News* {18 Jan} has just reported, those regulations have been delayed by interdepartmental discord in Washington that the White House has not yet moved to resolve.

9 February In the UK, the *Independent Review of the Possible Health Hazards of the Large-Scale Release of Bacteria during the Dorset Defence Trials* which, in response to public alarm, the Ministry of Defence had commissioned some six months previously [see 22 May 98] is now published (*Hansard (Commons)* written answers 9 Feb). The review, by Professor Brian Spratt, a microbiologist at Oxford University, concludes that the releases — of live *E coli* and *B globigii*, and of killed *S marcescens* and *K aerogenes* — were very unlikely to have had health consequences for the "overwhelming majority" of individuals that were exposed, although it was conceivable that they could have endangered the inestimable but small number of individuals rendered peculiarly susceptible because of severe immuno-deficiency, for example, or cystic fibrosis. Alluding to concerns that had been expressed within the exposed communities {London *Independent on Sunday* 31 Jan and 14 Feb}, Professor Spratt also concludes: "None of the bacteria that were released are known to cause miscarriages, chronic ill health, learning disabilities or birth defects. These types of health problem cannot be attributed to the release of bacteria during the Dorset Defence Trials."

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

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

On Iran, the unclassified version says: "Iran obtained material related to chemical warfare (CW) from various sources during the first half of 1998. It already has manufactured and stockpiled chemical weapons, including blister, blood and choking agents and the bombs and artillery shells for delivering them. However, Tehran is seeking foreign equipment and ex-

pertise to create a more advanced and self-sufficient CW infrastructure. Tehran continued to pursue purchasing dual-use biotechnical equipment from Russia and other countries, ostensibly for civilian uses. Its biological warfare (BW) program began during the Iran-Iraq war, and Iran may have some limited capability for BW deployment. Outside assistance is both important and difficult to prevent, given the dual-use nature of the materials and equipment being sought and the many legitimate end uses for these items."

On Iraq: "Since the Gulf war, Baghdad has rebuilt key portions of its chemical production infrastructure for industrial and commercial use. Some of these facilities could be converted fairly quickly for production of CW agents. The recent discovery that Iraq had weaponized the advanced nerve agent VX and the convincing evidence that fewer CW munitions were consumed during the Iran-Iraq war than Iraq had declared provide strong indications that Iraq retains a CW capability and intends to reconstitute its pre-Gulf war capability as rapidly as possible once sanctions are lifted. Iraq continues to refuse to disclose fully the extent of its BW program. After four years of denials, Iraq admitted to an offensive program resulting in the destruction of Al Hakam — a large BW production facility Iraq was trying to hide as a legitimate biological plant. Iraq still has not accounted for over a hundred BW bombs and over 80 percent of imported growth media — directly related to past and future Iraqi production of thousands of gallons of biological agent. This lack of cooperation is an indication that Baghdad intends to reconstitute its BW capability when possible."

On Libya, the unclassified version has nothing to say about BW programmes, but it does say: "Libya remains heavily dependent on foreign suppliers for precursor chemicals and other key CW-related equipment. UN sanctions continued to severely limit that support during the first half of 1998. Still, Tripoli has not given up its goal of establishing its own offensive CW capability and continues to pursue an independent production capability for the weapons."

On North Korea: "Pyongyang does not require significant outside assistance to produce ballistic missiles or weapons of mass destruction. North Korea produces and is capable of using a wide variety of CW agents and delivery means and is capable of supporting a limited BW effort."

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

On Syria: "Syria continued to seek CW-related precursors from various sources during the reporting period. Damascus already has a stockpile of the nerve agent sarin and may be trying to develop more toxic and persistent nerve agents. Syria remains dependent on foreign sources for key elements of its CW program, including precursor chemicals and key production equipment."

On China as a supplier: "Chinese entities sought to supply Iran and Syria with CW-related chemicals during this reporting period. The US sanctions imposed in May 1997 on seven Chinese entities for knowingly and materially contributing to Iran's CW program remain in effect."

On Russia as a supplier: "Russia remains a key source of biotechnology for Iran. Russia's world-leading expertise in biological weapons makes it an attractive target for Iranians seeking technical information and training on BW agent production processes."

Commenting on this last item, Russian Vice Premier Yuriy Maslyukov says to reporters: "Russia possesses an efficient enough system of exports control to prevent leak of ... technol-

ogies connected with creation of weapons of mass destruction". {Interfax from Moscow 10 Feb}

10 February In Japan a senior government official, unidentified, speaks to reporters about the project for destroying the abandoned chemical weapons in China [see 6 Jan]: "Of course we are aiming to finish the project by 2007. But I must say it might be difficult to dispose of all 700,000 dumped shells by 2007 because of the huge number." The official goes on to speak of the possibility of consulting with the Chinese government about seeking an extension of the deadline by the five years that are permissible under the Chemical Weapons Convention. {Asahi from Tokyo 12 Feb}

11 February Iraq, in the war of attrition being waged against it by UK and US forces [see 28 Dec 98], has thus far experienced some 40 strikes against its air-defence missile and gun sites in the northern and southern no-fly zones {*Aviation Week & Space Technology* 15 Feb, London *Independent on Sunday* 21 Feb}. It warns that it may now attack the bases in Saudi Arabia, Kuwait and Turkey from which the strikes have been launched {London *Guardian* 15 Feb, *International Herald Tribune* 17 Feb}. In Britain, Parliament is informed as follows by the Defence Secretary: "Coalition patrols of the Northern and Southern no-fly zones in Iraq are in support of UNSCR 688 [sic]. They are justified under international law on the basis of overwhelming humanitarian necessity. They prevent Saddam Hussein from using his air force against the Iraqi people in the north and south and enable us to monitor the actions of his forces on the ground. In responding to the threat from Iraqi air-defence systems, coalition aircraft have responded in self defence in a proportionate manner. This action is justified under international law on the basis of self defence." {*Hansard (Commons)* written answers 16 Feb}

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

11 February In the US House of Representatives, a hearing on *Protective Equipment and Countermeasure Devices* is conducted by the Armed Services Military Procurement Subcommittee. The detailed testimony presented by the service departments include particulars of the Joint NBC Defense Program, components of which include the Joint Service Lightweight Integrated Suit Technology (JSLIST), the Joint Service Light NBC Reconnaissance System (JSLNBCRS), the NBC Joint Warning and Reporting Network (JWARN), the Joint Service Fixed Site Decontamination System (JSFXD), the Joint Service Mask Leakage Tester (JSMLT), the Joint Service Container Refilling System (JSCRS). {FNS transcript 11 Feb}

12 February At UN headquarters in New York, Ambassador Celso Amorim of Brazil releases the final list of the names he is submitting to the Security Council for membership of the three panels that are to review UN relations with Iraq [see 30 Jan]. For the panel on "disarmament and current and future ongoing monitoring and verification" he names 20 people: Ichiro Akiyama (OPCW, Japan), Jacques Beaute (IAEA, France), Kaluba Chitumbo (IAEA, Zambia), Ron Cleminson (Canadian UNSCOM commissioner), Rachel Davies (UNSCOM, UK), Jayantha Dhanapala (UN Under-Secretary-General for Disarmament Affairs, Sri Lanka), Charles Duelfer (UNSCOM Deputy Executive Chairman, USA), Roberto Garcia Moritan (Argentina), Guennady Gatilov (Russian UNSCOM commissioner), Gabriele Kraatz-Wadsack (UNSCOM, Germany), Hideyo Kurata (Japanese UNSCOM commissioner), Liu Jieyi (China), Johan Molander (Swedish UNSCOM commissioner), Jack Ooms (Netherlands UNSCOM commissioner), Daniel Parfait (France), Gianpiero Perrone (Italian UNSCOM commissioner), Horst Reeps (UNSCOM, Germany), Paul Schulte (British UNSCOM commissioner), Tom Shea (IAEA, USA) and Nikita Smidovich (UNSCOM, Russia). {AFP from the UN 12 Feb} The panel begins its first session, in New York, on 23 February, its recommendations to the Security Council being due by 15 April {London *Financial Times* 24 Feb}.

16-17 February In Arlington, Virginia, a national symposium on *Medical and Public Health Response to Bioterrorism* is sponsored by the Center for Civilian Biodefense Studies (recently established by Johns Hopkins University under the direction of Dr D A Henderson [see 20 Nov 98]), the US Department of Health and Human Services, the Infectious Diseases Society of America and the American Society for Microbiology. Its organizers describe the symposium as "an effort to create awareness among health professionals so that they can lend their expertise in developing informed measures against bioterrorism". The description continues: "The symposium brings together medical, public health, government, intelligence, and military experts to consider why current concerns about bioterrorism are real and not inflammatory, why medicine and public health communities must address this issue, which biological threats warrant the most concern, and what the aftermath of an act of biological terrorism could be". More than a thousand people attend the symposium, listening to some 30 invited speakers and panellists. {<http://hopkins-id.edu/bioterror/agenda.html>, *Washington Post* 23 Feb} The keynote address is by US Health and Human Services Secretary Donna Shalala {FNS transcript 16 Feb}.

16-26 February In New York the Preparatory Commission for the International Criminal Court [see 24 Nov 98] conducts its first session. The Commission elects Ambassador Philippe Kirsch of Canada to its chair and focuses its discussion on Parts 5, 6 and 8 of the ICC Statute. The Statute, adopted dur-

ing the Rome Diplomatic Conference [see 17 Jul 98], will come into force once 60 states have ratified their signature of it; 75 states have signed so far and, on 2 February, Senegal became the first to ratify. The Commission is to reconvene for its second session during 26 July to 13 August. {UN press release L/2906 12 Feb, AP from the UN 26 Feb} The Presidency, now German, of the European Union, all of whose members are signatories, issues a statement pledging that it "will spare no effort", calling for the "widest support" for the Court, and stressing "the important future role of the International Criminal Court both in preventing serious violations of international humanitarian law and serious human rights violations, and in ensuring that those responsible for atrocities are brought to justice". {AP from the UN 17 Feb}

17 February In Karachi, *Jasarat* {17 Feb in FBIS-EAS 18 Feb} reports that, in preparation for the OPCW inspection at Wah Ordnance Factory in two days time, the government has dismantled a chemical plant there and levelled the ground on which it stood. The newspaper also reports: "To keep their mouths shut, the employees have been given a bonus equal to their one-month salaries."

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

17 February UK Defence Secretary George Robertson tells the House of Commons Defence Committee that one of the reasons why the UK had opposed the German proposal that NATO should move towards a no-first-use policy on nuclear

weapons [see 17 Oct 98] was that such a policy could assist potential aggressors by allowing them to consider a "chemical or biological assault without any fear of retaliation".

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

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

Historical Note no 3

Benjamin C Garrett

Walter Schreiber and the US Air Force

An ugly episode begins on 6 October 1951, when Dr. Walter P Schreiber, a former German army physician and infectious disease specialist, takes up a teaching post with the United States Air Force School of Aviation Medicine, then located at Randolph Field near San Antonio.¹ The episode will end with angry words, outright lies, and uncertainty.

As a member of the Department of Global Preventive Medicine, Schreiber lectures on chemical and biological warfare and on infectious diseases. He illustrates his lectures with results of experiments conducted on Nazi concentration camp inmates.

Schreiber has first-hand knowledge of these experiments. During World War II, he served in the German military as chief of the Science and Health Department in the Supreme Command of the German Army, rising to the rank of Brigadier General by war's end. He was the Army Surgeon General's representative to the *Blitzarbeiter* Committee reporting to the Reich Re-

search Council headed by Hermann Göring. Schreiber's wartime work focused on infectious diseases and epidemics – legitimate concerns for military medicine.²

But testimony from concentration camp survivors ties Schreiber directly to injecting inmates with gas gangrene, epidemic jaundice, typhus, and yellow fever.³ Far from being research in preventive medicine, this work with concentration camp inmates and other, similar research were conducted for the biological warfare research directorate of the Reich Research Council. Under the direction of Prof. Dr. Kurt Blome, the BW research directorate studied assorted defensive and offensive BW measures, including using submarine-launched rats as a means of disseminating plague and incorporating anthrax spores into toothpaste.⁴

Arrested and detained by US military because of his military rank of major general in the German army, Blome was interrogated about the work of the BW re-

search directorate, including his association with Schreiber. Their association continued after the war, when both wound up working as camp physicians at the European Command Intelligence Center in Oberus. In 1951, both signed contracts with the US military as part of "Project 63", a US Army Chemical Corps programme designed to gain access to German chemical and biological warfare experts, while denying these same experts to the Soviet Union. Blome was paid an annual salary of \$6,800 to work for the BW experts at Camp Detrick, Maryland, while Schreiber got to lecture on medical issues at the School of Aviation Medicine.⁵

Schreiber's lectures upset several of his School of Aviation Medicine students (mainly military physicians training to be flight surgeons). When their complaints are ignored by the Air Force and, in turn, the Defense Department, the students inform various special interest groups, including the Physicians' Forum and the Anti-Defamation League of B'nai B'rith.⁶ Among those speaking out against Schreiber is Jacob Javits, a newly elected Republican congressman from New York and a veteran of the US Chemical Warfare Service during World War II.⁷

The US military reacts to these complaints by attacking those protesting Schreiber. Major General Clark Ruffner, in a memorandum to Defense Secretary Robert Lovett, labels the protesters "victims of Communist infiltration"; incorrectly says Schreiber was only "alleged" to have been in the German military; and inaccurately states Schreiber "was neither accused nor tried for war crimes".⁸ Evidence against Schreiber was presented at the Nuremberg War Crimes Trial (a US military tribunal, not the more famous International Military Tribunal, conducted jointly among the US, British, French and Soviets). But the Soviets, who were holding Schreiber, refused to make him available to participate in his defence, and no conviction was possible.

The outcry over Schreiber reaches President Harry Truman. The pressure proves too much for the Air Force, and Secretary of the Air Force Thomas Finletter orders the School of Aviation Medicine not to renew Schreiber's contract.⁹ This order upsets Air Force Brigadier General Otis Benson, commander of the School of Aviation Medicine. He writes to medical schools, seeking a university appointment for Schreiber. In his letter, Benson laments "[Schreiber] is too 'hot' for me to keep here, using public funds.... There is an organized medical movement against him, emanating from Boston, by medical men of Jewish ancestry".¹⁰

The US proves too hot for Schreiber, and on 22 May 1952, he jumps on a commercial flight for South America and departs. His departure is facilitated by the Air Force, which directed the air attaché in Buenos Aires to

arrange his immigration and which provided both the ticket and a travel allowance. Schreiber had a daughter in Argentina, which by then was a well-established haven for Nazi war criminals. A later report will place Schreiber as living in San Anselmo, California, with a daughter and son-in-law.¹¹ Thereafter, the Schreiber episode drops from the public's attention. His fate remains unknown, other than the fact that he never comes to trial for any complicity in Nazi-era war crimes.

Notes

1. "Ex-Soviet Prisoner Joins Air Medicine Faculty", *The New York Times*, 7 October 1951.
2. Details on Schreiber's wartime service can be found in T Bower, *The Paperclip Conspiracy: The hunt for Nazi scientists* (Little, Brown: Boston, 1987) and in L Hunt, "U.S. coverup of Nazi scientists", *Bulletin of the Atomic Scientists*, April 1985, pp. 16-24.
3. For newspaper accounts tying Schreiber to such experiments, see C Nichols, "Wants to face doctor named experimenter", *Boston Post*, 11 February 1952, and R Dwyer, "Nazis' girl guinea pig cured, will go to Paris", *Daily News* (New York), 7 March 1952. In addition, Hunt, p 23, references a memorandum prepared by Alexander Hardy, former Nuremberg assistant prosecutor, in which he lays out war-crimes evidence against Schreiber.
4. Tests with rats were a failure, as they drowned, and the notion of submarine-launched plague-infested rats was abandoned. No information is available on the efficacy of the anthrax-laden toothpaste. Details are given in JM Barnes, C Henze, WJ Cromartie and JW Hofer, "A review of German activities in the field of biological warfare", Report no. B-C-H-H/305, War Department, Washington, DC, 12 September 1945.
5. Hunt, pp 21-4; Bowers, pp 255-7.
6. "Accused physician demands an inquiry", *The New York Times*, 13 February 1952, p 24:4; "Doctors' head urges ouster of Schreiber", *The New York Times*, 22 February 1952, p 23:7.
7. Koppman, L., "Rep. Jacob Javits demands deportation of Nazi medic", *National Jewish Post* (Indianapolis), 30 May 1952.
8. The memorandum from Ruffner is quoted in Bowers, pp 257-8.
9. "Air Force drops German physician accused as Nazi", *Times-Herald*, 27 February 1952.
10. "General goes jobhunting for 'hot' Nazi MD", *New York Post*, 28 April 1952. Benson's anti-Semitic reference to "medical men of Jewish ancestry" is most likely a somewhat misguided reference to the Boston chapter of Physician's Forum, which included Drs Leo Alexander, Jacob Fine, George Wisocki, and Helen Dane.
11. Hunt, p 21; Bowers, p 257; Koppman.

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

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

19 February In the United States, threatening letters mailed from Lexington, Kentucky, purporting to contain anthrax spores have begun to be received at about 20 abortion clinics and Planned Parenthood centers across the country, precipitating emergency measures including mass evacuation and dousing with bleach [see also 30 Dec 98]. {*Spokane Spokesman-Review* 23 Feb, Reuter from Newark 24 Feb} All are found to be hoaxes. This is reportedly the second wave of anti-abortion anthrax threats to hit the country since 30 October last, when 20 clinics in Indiana, Tennessee, Kansas and Kentucky received letters falsely claiming to contain anthrax {*Indianapolis Star* 12 Dec, *CDC Morbidity & Mortality Weekly Report* 5 Feb, UPI from New York 19 Feb} Other forms of anthrax-hoaxing continue [see 30 Dec 98] around the country, and have reportedly become "literally a daily event" {*MSNBC News* 1 Feb}. Every threat of anthrax contamination has proved to be false, so the FBI had been quoted as saying on 6 February {*Cox News Service* from Atlanta 6 Feb}.

21 February From Tehran the official Iranian news agency IRNA reports that a team of OPCW inspectors has this past week been touring sites, which it does not identify, to "verify the truth of the statements" made by Iran on the nature of their operations. {*Reuter* from Tehran 21 Feb}

22 February The State of Maryland issues environmental permits enabling the US Army to proceed with construction of a chemdemil facility to destroy the 1600 tons of bulk-stored mustard gas held in the Edgewood Area of Aberdeen Proving Ground. The construction contract has already been awarded to Bechtel National Inc [see 29 Sep 98]. Rather than incineration, the new Aberdeen Chemical Agent Disposal Facility (ABCDF) will use chemical neutralization followed by biodegradation to destroy the agent. {*CWWG news release* 24 Feb}

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

22 February In the US Congress, the General Accounting Office issues a study of two US Energy Department programmes that seek to stem WMD proliferation by engaging former Soviet

weapon scientists in work on peaceful civilian projects: the Initiatives for Proliferation Prevention (IPP) programme [see 3 Mar 98] and an offshoot from it, the Closed Cities Initiative. The report notes the value of these activities in ensuring that WMD-weapons scientists remain in their home-countries rather than countries of proliferation concern. The report does, however, also observe that some scientists "currently working on Russia's weapons of mass destruction" are receiving IPP funds; it also says that projects on which supported scientists are working "may not be adequately reviewed by US officials". In this regard, the Energy Department has, GAO also reports, pledged a strengthening of its oversight of the activities. The Chairman of the Senate Foreign Relations Committee, Senator Jesse Helms, issues a statement on the report saying: "It is absolutely unacceptable for the Clinton Administration to donate the US taxpayer's money to Russian scientists who spend their time working on poison gas, biological agents and the new nuclear weapons designs for the Russian Government." {*New York Times* 22 Feb}

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

28 February In Atlanta, Georgia, a two-and-a-half-day research planning conference on *The Health Impact of Chemical Exposures during the Gulf War* begins under the sponsorship of the Centers for Disease Control and Prevention in coordination with other offices and agencies of the US Department of Health and Human Services. The purpose, in the words of the convenors, "is to provide a forum for broad public input into the development of a multi-year research plan for investigating the relationship between chemical exposures during the Gulf War and illnesses affecting Gulf War veterans". Plenary speakers and panellists have been chosen to provide a special focus on: the pathophysiology/etiology of illnesses among Gulf veterans; the most appropriate methods for assessing and diagnosing health impacts of exposure to chemicals; the synergistic effect of exposure to multiple chemicals; the role of individual susceptibility; the role of multiple chemical sensitivities, chronic fatigue syndrome, fibromyalgia, autoimmunity and related disorders; the role of adaptation and conditioning; the development of biomarkers for chemical exposures and related illnesses; the most appropriate treatment approaches; and the prevention of similar illnesses in future military deployments. More than 200 scientists are expected to participate, as well as veterans and associated advocacy groups. {*GulfLink* from Washington 16 Feb, www.cdc.gov/nceh/meetings/1999/gulfwar/default.htm}

CBW Events data-base is compiled from news reports and other open-source documentation furnished to the Sussex Harvard Information Bank by ad hoc correspondents and systematic scanners, including: Joachim Badelt (in Germany), Gordon Burck (in the US), Rob Evans (in the UK), Daniel Feakes (in the Netherlands), Richard Guthrie (in the UK), Milton Leitenberg (in the US), Cairíona McLeish (in the UK), Tony Randle (in the UK), Sandy Ropper (in the US), Jenny Smith (in the US), Jonathan Tucker (in the US), Jean Pascal Zanders (in Sweden), and Elisabetta Zontini (in the UK).

Forthcoming events

The fourteenth session of the BWC Ad Hoc Group will be held in Geneva during 29 March–9 April, with subsequent sessions during 28 June–23 July, 13 September–8 October and 22 November–10 December.

The fifteenth session of the OPCW Executive Council will be held in The Hague on 26–29 April, with subsequent sessions during 21–24 September and 30 November–3 December.

The Fourth Chemical Medical Defence Conference of the German Ministry of Defence — *Clinical Management of Poisoning with Organophosphorus Compounds* — will be held at the German Armed Forces Medical Academy, Munich during 28–29 April. Enquiries to Dr Thierman, fax **49 89 315 5063.

The 1999 *Second Asian Conference on Chemical Weapons Convention* on the implementation and future development of the CWC will be held in Taipei on 12 May. Enquiries to Jack Chang, fax **886 3 573 2353, e-mail: 800699@ucl.itri.org.tw.

The Eighth Annual International Conference on Controlling Arms sponsored by the Defense Threat Reduction Agency on the theme *Controlling Arms: the Next Generation* will be held in Norfolk, Virginia, during 1–4 June. Enquiries to Verne Wattawa, fax, **1 703 658 3446, e-mail: conference@saic-cvr.com.

CWD99 — The Chemical Weapons Demilitarisation Conference and Exhibition sponsored by DERA and ICF Kaiser will be held in Vienna during 7–9 June.

Enquiries to fax **44 1252 393883, e-mail: cwd@dera.gov.uk.

The Fourth Session of the Conference of the States Parties to the CWC is to be held in The Hague during 28 June–2 July.

The fifth international *Chemical and Biological Medical Treatment Symposium (CBMTS III)* will take place in Spiez, Switzerland, during 11–16 July. Enquiries about participation to Rudolf Portmann, fax **41-33 228 1402, e-mail: rudolf.portmann@x400.gr.admin.ch.

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

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